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Descriptors-*Academic Achievement, *Behavior Problems, *Childhood Needs, Data Analysis, Educational Innovation, *Learning Difficulties

Identifiers-AML Behavior Rating Scale

The general purpose of this project was to initiate, implement and evaluate a program concerned with developing improved and more effective techniques for the reduction or prevention of learning and behavior problems in children. The children included in the PACE I.D. Center Study were an extreme group as far as behavior and learning problems were concerned. The evaluation of the PACE I.D. program presents an analysis of school based data, including descriptions of instruments, problems investigated, analysis and results of data, and an AML Correlation Study. The analysis of project-based data, including the assessment of family functioning, the summer activity program, a teacher survey, and improvements are given. Results include: (1) the children did show some improvement as they progressed in school, (2) about one-third improved so quickly that they needed little help from PACE social workers, (3) about one-third school success was tenuous, (4) about one-third would continue to require help, and (5) teachers rated the project of value to themselves, the children, their parents, the school, and community. The research reported herein was funded under Title III of the Elementary and Secondary Education Act. (Author/KJ)

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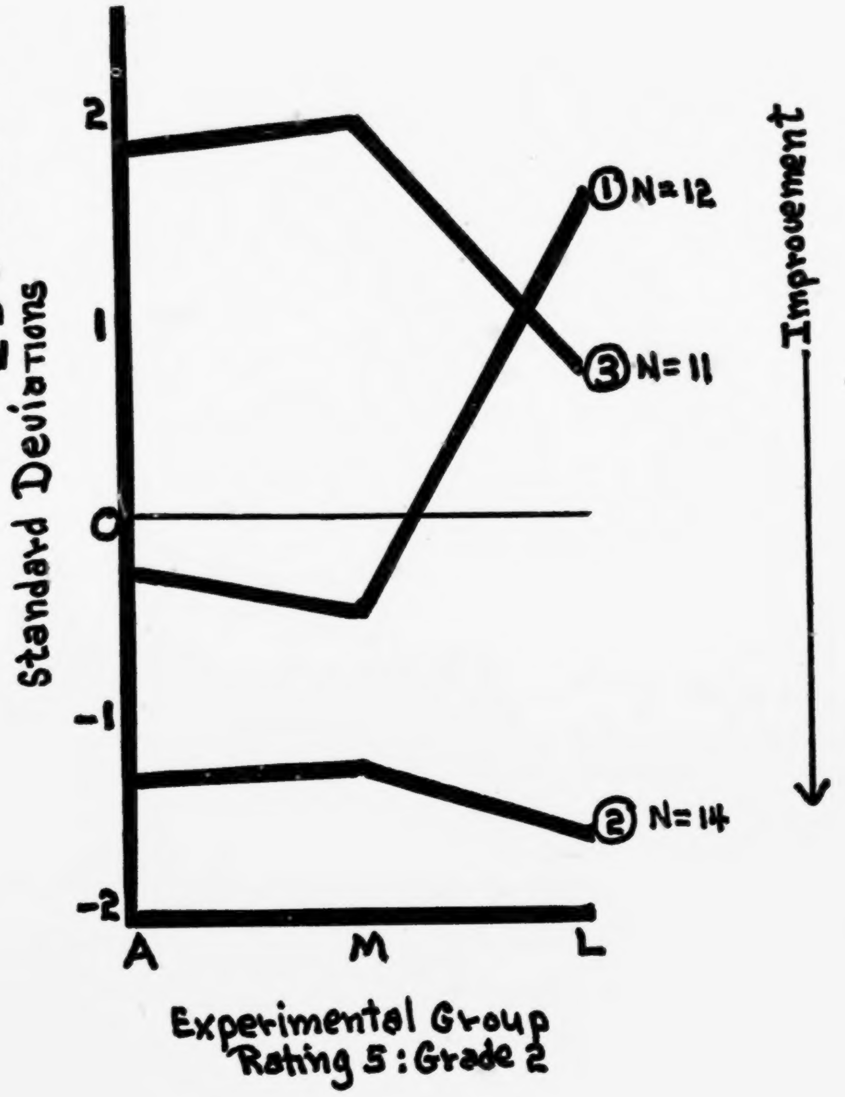


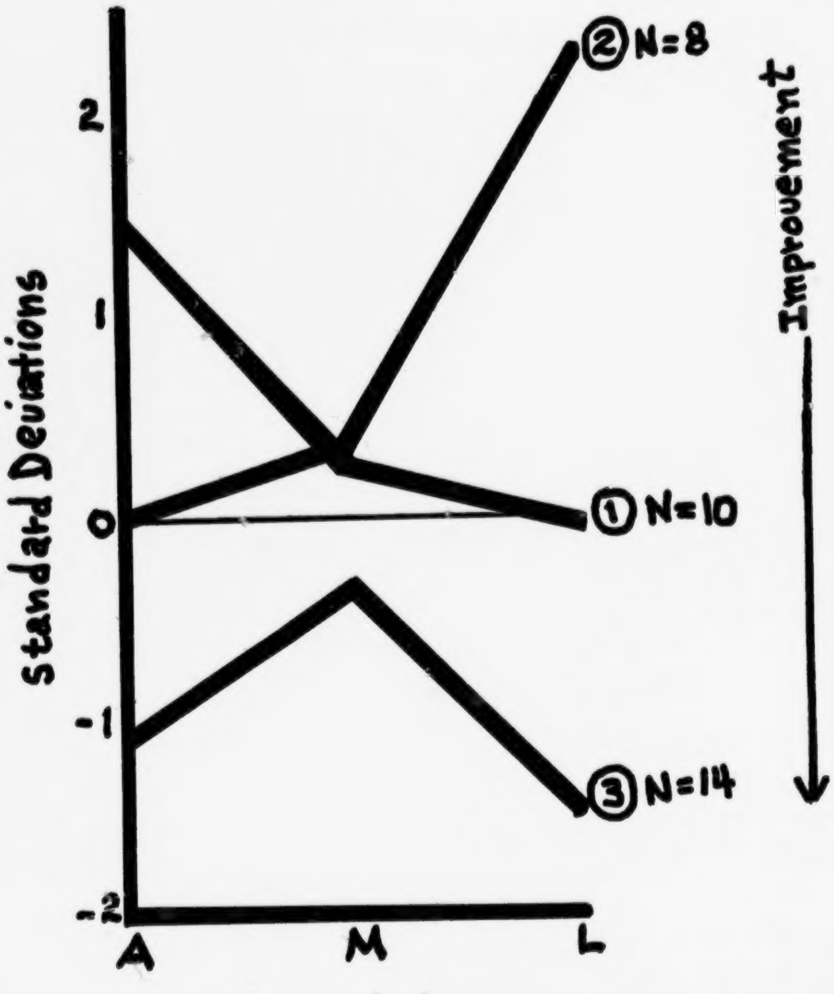
Experimental Group
Rating 5 : Grade 2

INVESTMENTS IN PREVENTION

the prevention of learning and behavior problems in young children.

EVALUATION REPORT

1966 - 1969



Control Group
Rating 5 : Grade 2

PACE **I. D. Center**
South San Francisco
Unified School District
Title III - ESEA

CG 004428

EVALUATION OF THE PACE I. D. CENTER PROJECT

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Appreciation to Gale Troupe and Dorothy Gordon, PACE secretaries.

June 1969

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FOREWORD

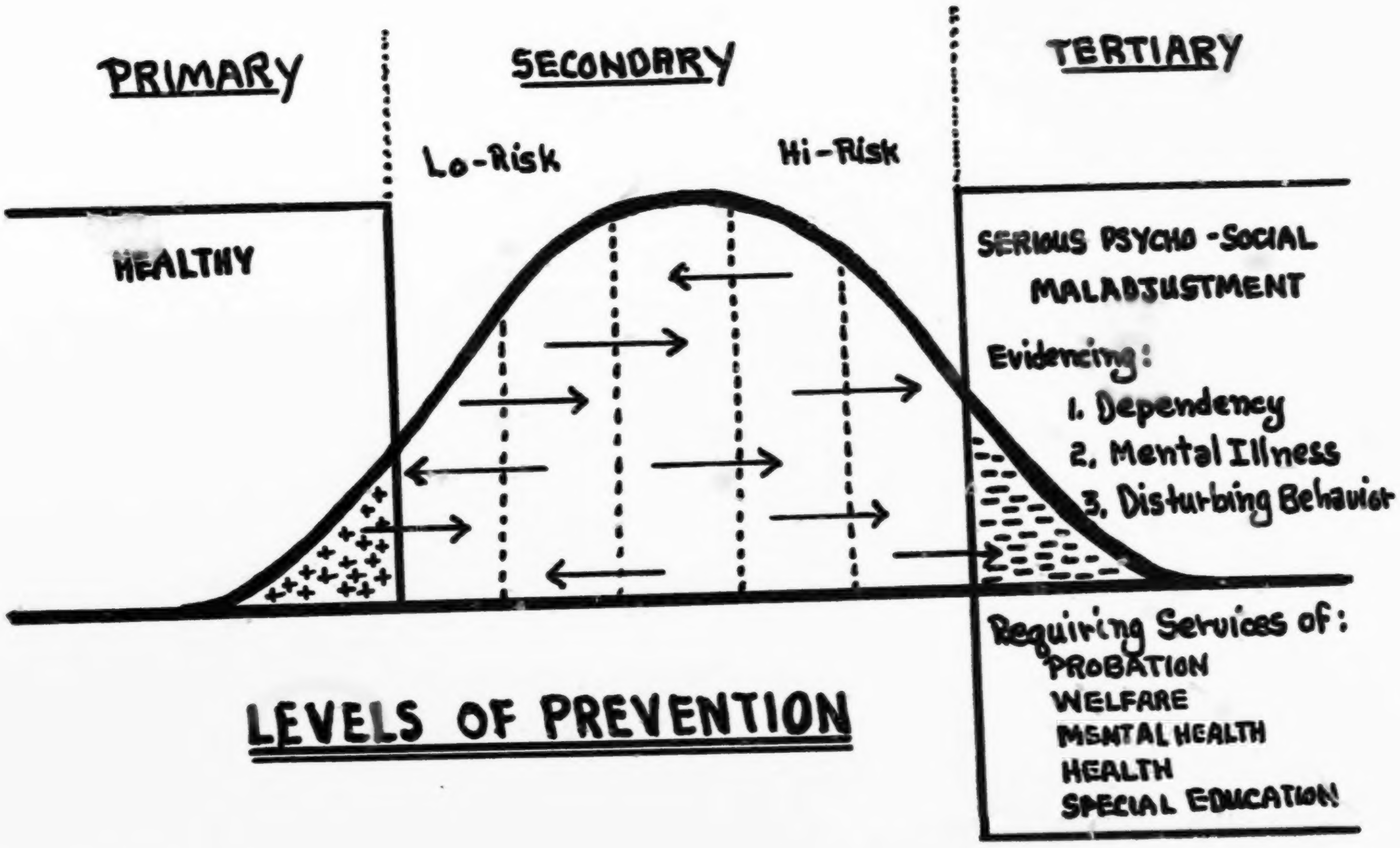
The Evaluation Report is concerned with the "hard" data as well as the "soft" data from the project. Those of us who have worked with the PACE I.D. Center are well aware of the complex problems involved in attempting to measure change. We are also aware that the scope of Title III - ESEA made it possible to work with each child in relation to his total environment, and to involve the responsible adults in a shared experience that was unique. Process evaluation helped to determine more appropriate, alternative courses of action during the project.

Part I of this report deals with the statistical analysis of school-based data, the hard data. Part II of this report deals with the project-based data, the "soft" data.

We wish to express our sincere appreciation to the Board of Trustees, the certificated staff, administrative staff, and classified personnel of the South San Francisco Unified School District for their participation in the project. Our appreciation, too, to the personnel of the Brisbane Elementary School District, the Bayshore Elementary School District, and to the Catholic Archdiocese.

To those staff members of the United States Office of Education - Title III, ESEA - and the San Mateo County PACE Center, our thanks for your help and your continued support.

A very warm expression of our appreciation is due to the PACERS; to their parents, their teachers, and to the community workers who believed in them.


PRIMARY
SECONDARY
TERTIARY
Lo-Risk
Hi-Risk
HEALTHY
SERIOUS PSYCHO-SOCIAL MALADJUSTMENT
Evidencing:
1. Dependency
2. Mental Illness
3. Disturbing Behavior
Requiring Services of:
PROBATION
WELFARE
MENTAL HEALTH
HEALTH
SPECIAL EDUCATION

LEVELS OF PREVENTION

PRIMARY PREVENTION - Even the healthy members of society are vulnerable during their lifetime, in times of stress, e.g., death, illness or accident to a family member, relative or friend, financial crisis, severe disappointment. Primary prevention is aimed at keeping these people healthy and able to cope effectively with problems as they arise.

SECONDARY PREVENTION - Secondary prevention deals with the Lo-Risk and Hi-Risk populations. The Hi-Risk group represents a "potential" population, some of whom will require special services, and many will require intermediate kinds of help from teachers, counselors, ministers. The Lo-Risk group are those who are generally considered able to cope with life's contingencies. This group can generally make effective use of friends, relatives, teachers, ministers, and others to help them in time of need.

The PACE I. D. Center program focuses on the Hi-Risk, Lo-Risk and Healthy segments of the population, at the Primary and Secondary prevention levels.

TERTIARY PREVENTION - For the most part, existing services are concentrated on that segment of the population who are readily identified because of serious psycho-social maladjustment. These are treatment services - or Tertiary prevention - aimed at helping people improve or keeping them from becoming more of a problem to themselves and to society.

EVALUATION OF THE PACE I. D. CENTER PROJECT
1966-1969: Title III - ESEA

The early identification and early intervention with
behavior problem children and their families.

PURPOSE OF THE PROJECT

The general purpose of the project was to initiate, implement and evaluate a program concerned with developing improved and more effective techniques for the reduction or prevention of learning and behavior problems in children.

More specifically, the project was concerned with

- the identification of behavior problem children through deviant school behavior.
- the demonstration of active intervention techniques within the school-home-community environment.

RELEVANT BACKGROUND INFORMATION

The community[1] viewed this project as "the most recent in a series of studies and community social planning efforts in San Mateo County concerned with children and families who show or have a potential for 'disordered behavior'." The PACE I. D. Center was to perform "the essential next steps in bringing social adjustment services (mental health and social work) and the schools to address themselves" to the specific project aims of early identification and early intervention.

Traditionally, social case work, clinical, welfare and judicial services have dealt with people who applied for help, were referred, were complained about or were reported as law breakers. Prevalence studies in demonstration projects (1, 2, 3) show that the service load of social adjustment agencies (as of a given month) amounts to between four and five percent of the community's families with children under eighteen years of age.

One research project (4) confirmed that the disorganized, inadequate families of San Mateo County often show evidence of school behavior problems among their very young children and that truancy, dropouts or delinquency are very common among their older children.

Studies carried on by the Gluecks (5) indicate that the potentiality for delinquency can be predicted by evaluating the quality of parental affection, supervision, discipline and family cohesiveness.

---

[1] San Mateo County Council of the Bay Area Social Planning Council. This representative community group initiated and funded the writing of the proposal for the PACE I. D. Center

Heretofore, the families with complex problems could only be identified by such devices as the Social Breakdown Index (6), the Family Unit Report Study (7), and the Disordered Behavior Roster (8). By the time families reach this stage, their troubles are many and their pathology well advanced.

The schools have shown an increasing awareness and concern for children with deviant behavior. The estimates of the number of "emotionally disturbed" children varies from ten to twenty percent of the school population. These estimates are based on a variety of evaluative techniques, from teachers' guesses to careful psychological inquiry. There are insufficient referral resources for children with problems, and unless a law enforcement agency is involved, many parents do not seek help or follow through with the referral for a variety of reasons including transportation problems, costs, lack of motivation, disagreement between parents, and pride. The child, however, is still in the classroom.

In 1958 and 1959 the California State Department of Education conducted a pilot study of emotional disturbance among school children in four areas of the State (9, 10). San Mateo County was one of these areas. From a sample of over 5,000 children, 9.8% were identified as emotionally handicapped according to the criteria which included classroom screening techniques followed by individual psychological evaluation. Legislation in California has implemented the findings of this study and school districts may initiate special programs for "educationally handicapped" children.

In 1962, it was possible to test the hypothesis that many of these 9.8% emotionally handicapped children in the San Mateo County Schools might be the children of the six percent hard-core, multi-problem families and that the identification of the children would mean the identification of the families. Also, if identification of these families could be accomplished while the children were in the early school grades, it would mean that the community services would know the families destined to be a considerable part of their workload while those families were still young, had fewer children and were, presumably, in early stages of disorganization, offering more favorable prognosis for treatment. In partnership, therefore, the schools and the social adjustment agencies could develop more effective programs of intervention and reduction of maladjustment problems.

Two behavior rating scales were used as a basis for identifying children in this 1962 study. One, a scale developed as the result of a special study in San Mateo County by Andrew Mikita (11), was based on the Glueck predictive indices. The other was the rating scale used in the California State Study (10). Both rating scales were administered by teachers in the first four grades where there were one or more children from known disordered behavior families. These children were not identified to the teachers. Eighty percent of the known disordered families were re-identified when their children were rated among the top twenty-five percent (high scoring) in their respective classrooms. Factor analysis of the items from both scales showed that eleven of the most discriminating items constituted a reliable and adequate instrument for the identification of behavior problem children (4). These eleven items constitute the A-M-L Behavior Rating Scale used in this project. A refers to aggressive-outgoing behavior. M refers to moody-internalized behavior. L refers to the learning factor.

The project was further identified with the fact that the studies referred to above show that the identification of children and families with problem behavior is very possible within the school setting. The problem remained, that of providing a process of intervention that

- would be helpful and meaningful to school staff and to families
- would provide continuity of service from identification to treatment
- would be cognizant of the implications of beginning symptoms and the need to intervene.

LOCATION

The project was located in San Mateo County, California, in the South San Francisco Unified School District. Other schools served by the project included the Brisbane and Bayshore Elementary School Districts, the three Catholic schools within South San Francisco, and a small Lutheran school.[2] The South San Francisco Unified School District is located within the boundaries of three communities -- South San Francisco, San Bruno and Daly City, with 95% of the pupil enrollment from South San Francisco.[3]

South San Francisco is both a residential and industrial city with a population of more than 42,000. It is located in the northern part of San Mateo County about seven miles from downtown San Francisco. When the prevailing westerly wind is blowing, it is directly beneath the flight pattern of jet planes as they leave the San Francisco Airport. Map I shows the geographical boundaries of the South San Francisco Unified School District.

THE POPULATION SERVED

Although there were two small elementary school districts included in the study (Brisbane and Bayshore), they represent a small proportion of the population served. The description that follows refers to the South San Francisco community.

The development of the South San Francisco Unified School District has been tied closely to the growth of the City of South San Francisco. The school district, however, is somewhat larger than the City. Some

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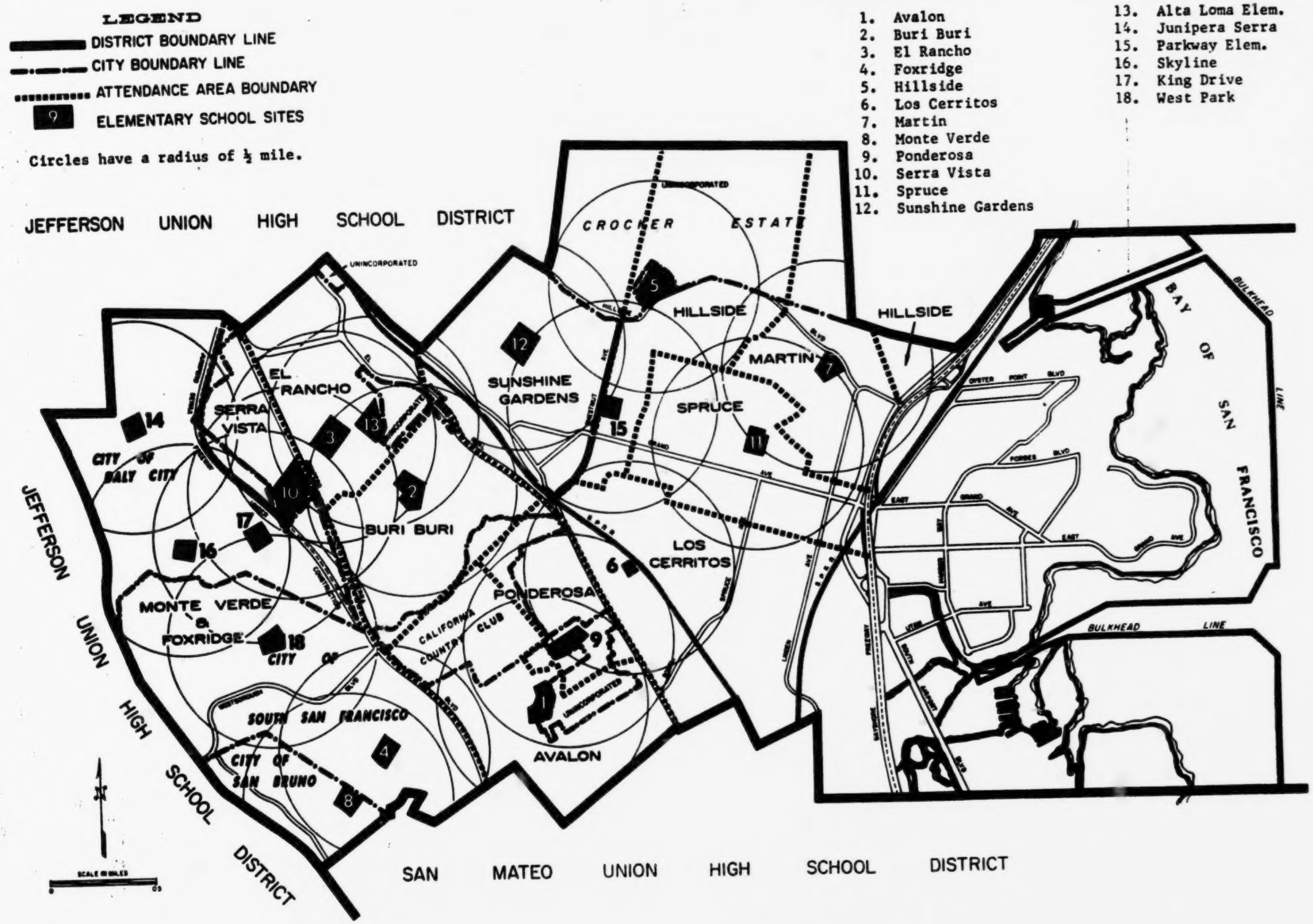
[2] The Lutheran School was included for consultation only for a period of one year, at which time the school closed.

[3] Demographic Data included herein are from Report of the Survey South San Francisco Unified School District. May, 1967. Pp. 4-6. Copyright 1967. Irving Melbo.

MAP I

ELEMENTARY SCHOOL SITES AND ATTENDANCE AREA BOUNDARIES, SOUTH SAN FRANCISCO UNIFIED SCHOOL DISTRICT, 1966-67


LEGEND
DISTRICT BOUNDARY LINE
CITY BOUNDARY LINE
ATTENDANCE AREA BOUNDARY
9 ELEMENTARY SCHOOL SITES
Circles have a radius of ½ mile.
JEFFERSON UNION HIGH SCHOOL DISTRICT
SAN MATEO UNION HIGH SCHOOL DISTRICT
UNINCORPORATED
CROCKER ESTATE
HILLSIDE
MARTIN
SPRUCE
SUNSHINE GARDENS
LOS CERRITOS
PONDEROSA
AVALON
EL RANCHO
SERRA VISTA
BURI BURI
MONTE VERDE & FOXRIDGE
CALIFORNIA COUNTRY CLUB
CITY OF DALY CITY
CITY OF SOUTH SAN FRANCISCO
CITY OF SAN BRUNO
BAY OF SAN FRANCISCO
BULKHEAD LINE
OYSTER POINT BLVD
FORBES BLVD
GRAND AVE
EAST
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
SCALE IN MILES
0
0.5

ELEMENTARY SCHOOLS:

1. Avalon
2. Buri Buri
3. El Rancho
4. Foxridge
5. Hillside
6. Los Cerritos
7. Martin
8. Monte Verde
9. Ponderosa
10. Serra Vista
11. Spruce
12. Sunshine Gardens

ELEMENTARY SCHOOL SITES:

13. Alta Loma Elem.
14. Junipera Serra
15. Parkway Elem.
16. Skyline
17. King Drive
18. West Park

"islands" of county area are included within the school district, and the Crocker Land to the north on the San Bruno Mountains is county area. In all, these county areas total about 900 acres. In addition, about 640 acres of the district are on the slopes of the western hills are in Daly City. Another approximate 160 acres in the southwest corner of the district are in San Bruno City.

The City of South San Francisco was started as an industrial center, and this emphasis in its development has continued to the present. Early history of the area was associated with the cattle business, thousands of acres nearby being used for grazing land. The Swift and Company meat packing facilities were first established near the bay in this area in 1892. Armour and Company also established a plant at a later date.

From this origin, extensive industrial developments have been established in the City between the Bayshore Freeway and San Francisco Bay and in the southern part of the land between El Camino Real and the Bayshore Freeway. The residential and commercial section of the early City developed in the northern part of this area between the Bayshore Freeway and El Camino Real.

The residential portion of the City was developed originally for those workers from the nearby industries, and this need continues to the present. Extension of the industrial components has stimulated the construction of nearby residential developments.

Population pressure from the high density San Francisco City area to the north also has resulted in demand for housing near to San Francisco. While the emphasis is on relatively modest sized homes, the area includes homes of wide range in cost. Families tend to be relatively larger in size than usually observed in California cities. The 1960 census shows an average of 3.8 persons per single family dwelling unit.

With parcels of undeveloped residential land becoming more and more scarce and the cost increasing proportionately, a trend toward multiple housing is in evidence in the original portion of the City. Newer residential tracts still are devoted largely to single family units, but some parcels are being retained for multiple units. Some of the land in the original portion of the City which initially was developed to single family units now has been zoned for multiple units. As the older homes are removed, these areas undoubtedly will change from single units to multiples.

With completion of planned residential developments on the slopes of the western hills, the available residential land for single family units will have become highly saturated. The Crocker Land will be virtually the only large undeveloped parcel remaining. Because of the steep slopes of this parcel, development undoubtedly will be quite expensive and may be delayed for some time. In contrast with the relative scarcity of residential land, large amounts of land continue to be available for industrial development.

These facts indicate that increasing pressure for more dwelling units to serve the expanding industrial developments will result in a growing trend toward multiple units. In time, such trend undoubtedly will result in high-rise dwelling unit structures.

The 1960 United States Census analysis shows that of the total population in the City, 39,418 at that time, the number of native born was 36,041 or 92 per cent, and the number of foreign born was 3,377 or 8 per cent. Of the latter, the mother tongue of groups which numbered over one hundred was: Italian - 989, Spanish - 570, English - 556, German - 271, Greek - 116.

Of the total population, 38,906 or 98.7 per cent were classified as white and 512 or 1.3 per cent as non-white. The non-white group is comprised of a number of subgroups.

As to occupational classification of employed males, Table 1 presents a breakdown from the federal census report. Compared with all urban areas in California, the figures show a somewhat small proportion in classification of professional and managerial occupations in South San Francisco. On the other hand, the skilled labor classifications show a significantly higher proportion in South San Francisco than for all California urban areas. The figures substantiate the claim of those who seek to attract industry to the area, that a large supply of skilled labor is close at hand.

TABLE 1

OCCUPATIONAL CLASSIFICATIONS FOR EMPLOYED MALES AS OF 1960 UNITED STATES CENSUS REPORT, CITY OF SOUTH SAN FRANCISCO COMPARED WITH ALL CALIFORNIA URBAN AREAS

		Proportion of total employed workers	
	Occupational classification	South San Francisco	All California urban
1.	Professional, technical & kindred workers	7.9%	14.3%
2.	Managers, officials and proprietors	10.9%	13.1%
3.	Clerical and kindred workers	9.7%	7.6%
4.	Sales work	8.6%	8.2%
5.	Craftsmen, foremen and kindred	26.8%	20.6%
6.	Operative and kindred	20.7%	16.7%
7.	Service workers	5.9%	6.9%
8.	Laborers, farm laborers and foremen	6.5%	7.4%
9.	Occupation not reported	3.0%	5.2%
	Totals	100.0%	100.0%

The population of the South San Francisco Unified School District is one which resides largely in relatively modest single family residences with families slightly larger than average. A somewhat larger proportion of the total population is in the skilled labor classifications. The population is a growing one and it is gradually taking on the general characteristics of the populations in the metropolitan areas surrounding the original community.

STATISTICAL ANALYSIS OF SCHOOL-BASED DATA

Restatement of Purpose

The purpose of the study was to identify children in the lower elementary grades who exhibited behavior and/or learning difficulties and then to provide a program of intervention. The intervention was designed to assist the families of these children, the school and community personnel concerned with these children, and the children themselves to develop greater awareness of the nature of the problems and to become more involved in their remediation. The program was concerned with the prevention of long-term deleterious effects.

It was hypothesized that an early intervention program carried out by a staff of social workers would change the behavior and school functioning of the selected children and that the change would be reflected in their scores on the AML Behavior Rating Scale, developmental perceptual tasks, and achievement tests.

Intervention Program[1]

The intervention program was implemented by five social workers whose respective caseloads included approximately 30 experimental subjects designated as PACERS. The intervention program was based upon established practices within the field of social casework. The methods and emphases of the intervention were determined by the social worker using her professional judgment and skills. In some cases, intervention occurred primarily with the parents or with school personnel; in other cases, directly with the individual subject, the PACER. In most cases, community agency personnel were included as various combinations of these intervention procedures were employed. It was hoped that by helping the significant adults become more aware of the causal factors involved in behavior that they could, in turn, develop new interactions with the PACER which would make possible more appropriate behavioral responses and promote more effective school functioning.

Methodology

The Sample

Initially, 19 schools from five school districts were included in the study. Three of these were public school districts, two were church related. District III, a church related district, contained only one school and was dropped from the study during the initial stages because the school itself closed. Table 2 presents the distribution of participating schools in Spring 1966 and Spring 1968, according to district.

In the Spring of 1966, all children in kindergarten through fourth grade (N = 6,116) were screened by classroom teachers using the AML Behavior Rating Scale. Those children who scored within the top 10% of their respective school districts comprised the sample considered for the

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[1] Refer to Intervention Reports I, II.

TABLE 2

DISTRIBUTION OF PARTICIPATING SCHOOLS IN SPRING 1966 AND SPRING 1968 ACCORDING TO DISTRICT AND POPULATION SCREENED: KINDERGARTEN THROUGH FOURTH GRADE

	Number of Schools		District		Initial Population Screened
	1966	1968			
	11	13	I	South San Francisco Unified	4,744
	3	3	II	Catholic Schools (SSF)	588
	1	0	III	Lutheran School (SSF)*	16
	2	3	IV	Bayshore Elementary	328
	2	3	V	Brisbane Elementary	437
Total	19	22			6,113

*District III dropped from the study

During the course of the project, subjects moved to other school districts. The following school districts participated in the AML Behavior Ratings, and, in the case of the experimental subjects, in the intervention process with the PACE social worker:

District	Participation		Number of Subjects
	Ratings	Intervention	
San Francisco Unified	X	X	7
San Mateo County			
Laguna Salada Elementary	X	X	4
Jefferson Elementary	X	X	3
San Bruno Park Elementary	X	X	3
Millbrae Elementary	X	-	2
Belmont Elementary	X	-	1
San Mateo Elementary	X	-	1
Roger Williams School	X	X	1
Edgewood School (S.F.)	X	X	1
Kittredge School (S.F.)	X	X	1
San Jose Unified	X	X	2
San Juan Unified	X	X	1
Napa Unified	X	X	1
Fremont School District	X	X	1
Seattle, Wash. School District	X	-	1
Lafayette Elementary School Dist.	X	-	1
Washington Unified School Dist.	X	-	1
Santa Clara School District	X	-	1
Concord School District	X	-	1

intervention program.[2] The study was designed to include only those families who were not on the active roster of any of four social adjustment agencies in San Mateo County at the time of initial screening, March, 1966. These agencies were: Probation, Health and Welfare, Catholic Social Service, and Family Social Service. The exclusion of families who were on agency rosters at the time of initial screening meant that for the most part only families with beginning symptoms of potentially impaired family functioning were included in the study. There were no known hard-core, multi-problem, chronic disordered behavior families.

A total of 626 subjects were available for matching on the basis of grade level, sex, and the L (learning) score on the AML Behavior Rating Scale. Of this number, 354 or 177 matched pairs resulted. In matching, a difference of not more than 2 points on the L score was allowed. The members of the pairs were then randomly assigned to an experimental or control group. The experimental group was included in the intervention program; the control group was not.

Active intervention was focused on experimental subjects in kindergarten through second grade. Subjects in grades three and four were included only if there was a request by the principal and the social worker felt that including the subject would be useful to the intervention program in that school.

Table 3 indicates the distribution of the sample according to initial grade level and the several subgroups that emerged on the basis of available test-retest scores. With the exception of subgroups A_2, B_2 and C_2, all subjects were screened initially in March of 1966. The A_2, B_2, and C_2 subjects were initially screened in November of 1966 during their first semester in kindergarten. As a consequence, they were given only four AML ratings. Had this group not been included, there would have been no kindergarten subjects in the program, except for four children who were retained. Table 4 on page 20 indicates the number of boys and girls in Group A according to matched pairs and grade level.

The total caseload for social workers was 156, with an average of 31 cases for each worker. Of the original 177 matched pairs, 21 pairs were not included in the study because the members did not return to school, or they were third and fourth graders and social workers already had maximum caseloads composed of children in kindergarten through second grade.

As the study progressed, some subjects moved to distant geographical areas, and some had insufficient data to remain in the matched pairs group. This left a total of 130 matched pairs, and 18 unmatched experimental subjects with complete data, (groups A,B,C). These groups formed the basis for the statistical evaluation.

Siblings who scored in the top 10% on the AML Scale were always included in the same group, either experimental or control. There were ten experimental siblings and 13 control siblings who had no matched member.

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[2] The top 10% were high scoring children evidencing behavior and/or learning problems at the time of initial screening.

TABLE 3

NUMBER OF SUBJECTS ACCORDING TO GRADE LEVEL AND GROUP

	Groups[*]								
	A		B		C		D		
Grade level	A_1	A_2	B_1	B_2	C_1	C_2	D_1	D_2	Total
K	56 (28)[**]	40 (20)	4 (2)	12 (6)	7	10	[illegible]	0	133 (56)
1	72 (36)		0 (0)		0		3		75 (36)
2	46 (23)		8 (4)		0		0		54 (27)
3	10 (5)		4 (2)		1		1		16 (7)
4	6 (3)		2 (1)		0		0		8 (4)
Total	190 (95)	40 (20)	18 (9)	12 (6)	8	10	8	0	286 (130)

[*] Subgroups A_1, B_1, C_1 and D_1 contain those subjects who were initially screened in March, 1966. Subgroups A_2, B_2, C_2 and D_2 contain those subjects who were initially screened in November, 1966.

A: Matched pairs with complete data
B: Subjects matched on AML only; other data incomplete.
C: Unmatched experimental subjects, complete data.
D: Unmatched experimental subjects, incomplete data.

[**] Numbers in parentheses indicate number of matched pairs.

TABLE 4

DISTRIBUTION OF GROUP A, MATCHED PAIRS, ACCORDING TO GRADE LEVEL AND SEX

Grade	Boys	Girls	Total
K (Subgroup A_1)	21	7	28
K (Subgroup A_2)	14	6	20
1	28	8	36
2	15	8	23
3	5	0	5
4	3	0	3
Total	86	29	115

Assessment of Change on Four Criteria

Complete Data

Test-retest data was obtained on four criteria used to assess change within the two-year period of intervention. Complete data included scores on:

1. A-M-L Behavior Rating Scale: five scores; four scores for subgroups A_2 and B_2.
2. Wide Range Achievement Test: test-retest scores.
3. Bender Visual Motor Gestalt Test: test-retest scores.
4. Draw-A-Person Test: test-retest scores.

Description of the Instruments

A-M-L Behavior Rating Scale. This is a simple, reliable 11-item screening device for identifying those children with behavior and/or learning problems as perceived by classroom teachers. The five odd-numbered items comprise subscale A and relate to aggressive behavior:

1. Gets into fights or quarrels with other pupils.
3. Is very restless.
5. Enjoys disrupting class discipline.
7. Is very obstinate.
9. Is very impulsive.

The five even-numbered items comprise subscale M and refer to moody, withdrawn, internalized behavior:

2. Has to be coaxed or forced to work or play with other pupils.
4. Is unhappy or depressed.
6. Becomes sick when faced with a difficult school problem or situation.
8. Is overly sensitive to criticism.

One item comprises the L subscale and refers to degree of learning difficulty.

11. Has learning difficulty.

Each item has a range of from one point (behavior occurring seldom or never) to five points (behavior occurring all of the time). The range of possible scores on subscales A and M is from 5 to 25 points; on subscale L, from 1 to 5 points; thus, on the total scale, the range is from 11 to 55 points with low scores being more desirable. (Appendix A, p.50)

The teacher was instructed to check each item according to her perception of the child's behavior. Teachers used their own judgment and received no training relevant to their use of the AML Scale.

The Wide Range Achievement Test, the Bender Visual Motor Gestalt Test, and the Draw-A-Person Test were administered individually to all experimental and control subjects by a team of PACE research assistants. There was a minimum elapsed time of one year between the first and second tests.

Wide Range Achievement Test. This is an easily administered, standardized test comprising the three basic subjects of reading, spelling and arithmetic (12). The clinical origins in the development of the WRAT made it an appropriate instrument to assess the individual achievement of children with behavior and learning problems. The test was scored according to the test manual, with grade equivalent scores used to assess change from Test 1 to Test 2.

Bender Visual Motor Gestalt Test. This is a widely used, easily administered, reliable, perceptual-motor test that takes into account how an individual perceives nine geometric designs (13). The subject is instructed to copy each design as well as he can or as he sees them. The visually perceived stimulus is organized by the individual in terms of his own experiences. The clinical origins of this test made it an appropriate instrument to assess the perceptual-motor skills of the children included in this study.

Scoring. The Bender Visual Motor Gestalt Test was scored by two different methods:

1. Judgment of test-retest performances. This method was used to assess the child's perceptual-motor ability to reproduce the designs in test-retest performances. A change score between Test 1 and Test 2 was obtained from independent ratings by three psychologists and three primary teachers.

The first and second drawings were considered as a pair. Each pair of drawings was randomized, and each judge rated each pair. The judges did not know to whom the drawings belonged nor the order in which the drawings had been executed. They were told to rate the two protocols according to the overall accuracy with which the nine figures on the test cards had been reproduced. When one protocol was considered to be better than the other, it was placed on top of the other and in a pile marked "Improved." When no difference could be perceived between the protocols, they were placed in a "No Improvement" pile. Each judge was free to determine his own criteria for "goodness of form" but was requested to record the criteria used and any special considerations given to any particular protocols. The nine Bender cards were placed in front of the judge for reference.

At the termination of the judging, a score for each pair of protocols was assigned by a PACE worker. When the second protocol was judged to be better than the first, a score of 1 (improvement) was assigned to the pair. When the first protocol was judged to be better than the second, a score of 3 (regression) was assigned to the pair. When no difference was recorded by the judge, then a score of 2 (no improvement) was awarded the pair. The three independent scores for the psychologists were summed separately from the three independent scores for the teachers; thus, each subject received two summed scores ranging from 3 to 9 points.

2. Judgment of protocols for signs of emotional disturbance. The first and second protocols were randomly arranged and independently scored by a clinical psychologist using the Koppitz Scale for Emotional Indicators (14). Scores were assigned within the range of 0 to 6 and according to Koppitz' findings were interpreted as follows:

Score	
0 - 2	No emotional problems
3	Emotional problems: 50% of subjects
4	Emotional problems: 80% of subjects
5 or above	Serious emotional problems

Draw-A-Person Test. This is a widely used, easily administered perceptual motor task that has its origins in Goodenough's Draw-A-Man Test for the measurement of intelligence (15). Machover developed the Drawing of the Human Figure as a projective technique for body image (16). Unlike the visual stimulus required in the reproduction of the Bender Gestalt designs, the Draw-A-Person task is in response to an auditory stimulus to "draw a person" or "draw somebody." This task is assumed to be associated with the dynamics of self-image or self-concept and is not dependent on an external stimulus.

In the present study, after the subject drew a person of his choice he was asked to draw a person of the opposite sex. Thus, two protocols were collected from each subject at each testing session.

Scoring. The Draw-A-Person Test was scored by two different methods:

1. *Judgment of test-retest performances*. This method was used to assess the child's perceptual-motor ability to draw a person in test-retest performances. The procedure for judging and scoring the protocols was the same as that described for the Bender Visual Motor Gestalt Test; however, there were two pairs of drawings to be judged for each subject, one pair of male figures and one pair of female figures. These pairs were randomized and scored independently. Each subject received four final summed scores, two determined by the school psychologists and two determined by the teachers.

2. *Judgment of protocols for signs of emotional disturbance*. All four drawings for each subject were randomly arranged and independently scored by a clinical psychologist using the Evanston Early Identification Scale (EEIS) (17). The scores for the two male drawings were compared, and those for the two female drawings were compared. The scaled scores were interpreted as follows:

Score:	
0 - 4	Low risk in terms of possible referral to school psychologist for learning or emotional problems
5 - 7	Medium risk for possible referral to school psychologist
8 - above	High risk for possible referral to school psychologist

Although the EEIS is standardized for ages 5 years, 0 months through 6 years, 3 months, it was applied to all drawings. The assumption was that those subjects beyond the age of 6 years, 3 months who received a score of 5 or above would probably be high risk children.

In order to disguise the control group subjects during the two individual testing sessions, a placebo group of subjects comprised of every tenth non-experimental or non-control subject on the class list was tested. The members of this group served no other purpose than one of disguise, and following the second testing session, the members were returned to the total population.

Group Tests. In addition to the above measurements, the total reading score from the Stanford Achievement Test was obtained from the school cumulative records for 43 matched pairs for whom they were available. Since raw scores for total reading were unavailable, every effort was made to secure grade equivalent scores. When this was impossible, grade equivalent scores for total reading were interpolated using as a base for computation the grade equivalent scores for the two subtests composing the total reading score.

Intelligence test scores were also collected from the school cumulative records for the same 43 matched pairs. These scores were determined by the Pintner-Cunningham Primary Test, Form A, administered in kindergarten and by the Lorge-Thorndike Intelligence Test, Form AP, Level 2, administered in the third grade.

The Problems Investigated

The major areas of investigation were addressed to the following problems:

1. Did the subjects who participated in the intervention program differ from those who did not in regard to their scores on the AML ratings?

2. Did the subjects who participated in the intervention program differ from those who did not in respect to change scores on individual and group achievement tests?

3. Were the scores on the emotional indicators of the Bender Visual Motor Gestalt and Draw-A-Person Tests different for the experimental subjects than for the control subjects?

4. Did the experimental subjects perform differently on the perceptual components of the Bender Visual Motor Gestalt Test and the Draw-A-Person Test than did the control subjects?

The Analyses and Results of the Data

The experimental and control subjects were sufficiently different from the total school population to constitute an extreme group. (See Appendix A)

The AML Behavior Rating Scale

Analysis of variance. This method was used to test for the influence of the intervention program upon change for total scores over five ratings for the experimental and control groups, for change on the A subscale scores over five ratings, for change on the M subscale scores, and for change on the L subscale scores. Separate analyses were run for those subjects having five AML ratings (subgroups A_1 and B_1) and for those subjects having four AML ratings (subgroups A_2 and B_2).

There were no significant differences between the scores of the experimental and control members of subgroup A_1 on any of the analyses of variance. The means over five ratings for the total AML score were 27.17 for the experimental group and 26.48 for the control group.

There were no significant differences between the scores of the experimental and control members of subgroup A_2 on any of the analyses of variance. The means over four ratings for the total AML score were 25.92 for the experimental subjects and 26.92 for the control subjects. Nor were there differences between the experimental and control groups when subgroups A_2 and B_2 were combined.

When subgroups A_1 and B_1 were combined, however, a significant difference between the experimental and control groups was observed over five ratings on the M subscale ($F = 4.11$, $df = 1/103$, $p < .05$). The mean over five ratings for the experimental group was 10.83; for the control group, 10.16 (see Table 5 for the means and standard deviations for all five ratings).

Another set of analyses included a selected sample of experimental subjects taken from subgroups A_1 and B_1; these subjects were known as "intensives" because they or their families had been given intensive treatment by the social workers. There were 58 matched subjects in this category who had been rated five times on the AML Scale by their teachers. The results of the analysis of variance over five ratings indicated a significant difference on the M subscale ($F = 4.51$, $df = 1/57$, $p < .05$). The mean for the experimental group was 11.55; for the control group, 10.51. No other significant differences were observed for the intensive group.

When the mean differences between the first and last ratings were investigated for each subscale, a significant difference was found on the A subscale between the experimental and control subjects of group A ($t = 1.98$, $df = 115$, $p < .05$;)(see Table 6). There were significant differences however, between the means for the members of the experimental and the control groups on the first rating or on the fifth rating. When the ratings for the members of subgroup A_1 were investigated, it was discovered that the difference between the means for the experimental and control members was significant on the first rating but not on the fifth rating. In order to adjust for initial differences for group A and subgroup A_1, analyses of covariance were run. The results indicated no significant differences between the experimental and control subjects. (Group A: $F = 3.30$, $df = 1/113$, $p = 7.05$; Group A_1: $F = 2.87$, $df = 1/93$, $p = 7.05$)

In order to determine whether there was a significant difference between the experimental and control subjects who received final total AML scores below 25 points, chi square analyses were performed. Twenty-five was used as the critical score because it was the average of the initial cut-off points used in establishing the upper 10% of the sample from each school district.

For the first analysis, matched pairs were disregarded; all subjects in groups A through D were used. The results indicated that there was no difference between the experimental and control subjects. The experimental subjects did not attain final scores lower than 25 in a sufficient number of cases to differentiate significantly their change scores from those of the control group.

When the scores of all of the subjects in Groups A and B were used in the same type of analysis, no significant difference between experimental and control subjects was found. Similarly, results were non-significant when the scores of 69 matched intensives from groups A and B were analyzed.

TABLE 5

MEANS AND STANDARD DEVIATIONS FOR SUBGROUPS A_1 AND B_1 FOR FIVE RATINGS ON THE M SUBSCALE

	Experimental		Control	
Rating	M	S.D.	M	S.D.
1	12.70	4.04	12.40	3.34
2	9.88	3.76	8.74	3.59
3	10.61	3.75	10.18	4.15
4	10.44	4.12	9.16	3.49
5	10.50	4.24	10.30	3.98

M = mean
S.D. = standard deviation

TABLE 6

MEAN DIFFERENCE BETWEEN RATING 1 AND RATING 5 ON THE AML SCALE FOR THE EXPERIMENTAL AND CONTROL SUBJECTS OF GROUP A

	Mean Difference Rating 5 - Rating 1	S.D.	S.E.
A	-1.46	6.97	0.65*
M	-0.17	6.95	0.65
L	0.10	1.50	0.14
T	-1.69	12.81	1.20

*$t = 1.98$, df 115, $p < .05$.
S.E. = standard error of the mean

Further chi square analyses revealed no significant differences between the experimental and control subjects (all subjects, matched subjects, matched intensives) who scored below 25 or at or above 25 over grade levels, nor were any differences found between the experimental and control subjects when the amount of change and initial AML scores were compared.

Chi square analyses of differences between boys and girls on the fifth AML rating revealed only that the experimental and control girls combined (groups A and B) were rated significantly different than were the combined experimental and control boys ($X^2 = 9.34$, $df = 3$, $p = < .05$). Inspection of the means revealed that the girls were rated lower than were the boys. The mean for the girls was 22.57 with a standard deviation of 8.26; the mean for the boys was 26.90 with a standard deviation of 9.15.

Wide Range Achievement Test

The adjusted mean difference for grade equivalent scores between Test 1 and Test 2 on the arithmetic subtest of the Wide Range Achievement Test indicated a significant difference between the experimental and control subjects in group A ($t = 198$, $df = 115$, $p < .05$). The mean adjusted score on change for the experimental group was -0.06, and for the control group, -0.21. Although neither group achieved an expected gain of ten months (one school year) the experimental subjects gained one and one-half months more than the control group. For the reading and spelling subtests, there were no significant differences between the experimental and control subjects. Table 7 presents the means, standard deviations, and standard errors of the means for reading, spelling, and arithmetic.

Chi square analyses were performed to determine whether there were significant differences between the number of experimental subjects and the number of control subjects who attained scores either above or below grade level on the second test as compared with the first test. No significant differences were found.

Bender Visual Motor Gestalt Test

The summed scores of the three school psychologists and of the three primary teachers were analyzed separately by sign tests. There were no significant differences between the experimental and control subjects of group A as judged either by the school psychologists or by the teachers. Furthermore, a sign test indicated no significant differences between the two groups on emotional responses as determined by scores on the Koppitz' Scale for Emotional Indicators.

An interesting result did occur, however when the three school psychologists' ratings for the combined experimental and control protocols for subjects in group A were compared with those of the three primary teachers. A sign test revealed that the difference between the psychologists and teachers was significant at the .01 level. The means and standard deviations between the scores for the two sets of judges revealed that the teachers as a group rated the protocols lower (indicative of improvement)

TABLE 7

MEANS, STANDARD DEVIATIONS, AND STANDARD ERRORS OF THE MEANS FOR GRADE EQUIVALENT AND ADJUSTED GAIN SCORES ON THE WIDE RANGE ACHIEVEMENT TEST, 1967-1968

	Reading			Spelling			Arithmetic		
	M	SD	SE	M	SD	SE	M	SD	SE
Experimental Group (N = 115)									
Grade Equivalent Scores	1.30	0.83	0.08	1.18	0.86	0.08	1.23	0.53	0.05
Adjusted Scores	0.02	0.80	0.07	-0.10	0.84	0.08	-0.06	0.59	0.05
Control Group (N = 115)									
Grade Equivalent Scores	1.37	0.77	0.07	1.17	0.66	0.06	1.14	0.59	0.05
Adjusted Scores	0.02	0.76	0.07	-0.18	0.65	0.06	-0.21	0.59	0.06

than did the psychologists (Psychologists: M = 4.36, S.D. = 1.43; teachers: M = 4.14, S.D. = 1.34).

Experimental and control subjects from groups A and B who received a score of 4 or 5 on the Koppitz Scale for Emotional Indicators were analyzed in terms of improvement, no change or regression from Test 1 to Test 2. A score of 5 indicates emotional problems; 80% of the subjects scoring 4 have emotional problems. The relevant data is reported in Table 8.

Fifty-three percent of the control subjects improved from Test 1 to Test 2, 45% of the experimental subjects improved. Thirty-seven percent of the control subjects regressed from Test 1 to Test 2, 24% of the experimental subjects regressed. For 10% of the control subjects there was no change, for 31% of the experimental subjects there was no change. It would appear that whereas more control subjects evidenced fewer emotional indicators on Test 2, there were also more control subjects who showed more emotional indicators or who regressed on Test 2.

The Draw-A-Person Test

The same type of analyses were run using the summed scores of the Draw-A-Person Test for the subjects in Group A. There were no significant differences between groups as judged by the psychologists or by the teachers, nor were there any significant differences on emotional factors as determined by scores on the Evanston Early Identification Scale.

Group Tests

In order to compare grade level differences for total reading scores on the Stanford Achievement Test, Wilcoxon Matched Pairs Tests were used. Comparisons were made between scores for those subjects who had successive tests in grades one (1966), two (1967), and three (1968) (N = 16 pairs); for those who had tests in first and second grades (1967 and 1968) (N = 16 pairs); and for those who had tests in second and third grades (1966 and 1967) (N = 13 pairs). The results indicated no differences between groups on any of the analyses.

Analyses on Retained Subjects

In order to determine whether differences occurred between first and last test scores for 19 unmatched experimental and 18 unmatched control subjects who were retained either before the project was begun or during the course of the project, special analyses were conducted. First and last scores with appropriate adjustments were obrained for the AML Behavior Rating Scale, the Wide Range Achievement Test, the Bender Visual Motor Gestalt Test, and the Draw-A-Person Test. A Mann-Whitney U-Test indicated a significant difference between the experimental subjects and the control subjects on change for total score from rating 1 to rating 5 or the AML Scale (CR = 106 for $\alpha = < .05$). A difference of 9 points was obtained for the experimental subjects; while a difference of only 2 points was obtained for the control subjects. There were no other differences between the two groups.

TABLE 8

DATA FOR EXPERIMENTAL AND CONTROL SUBJECTS WHO RECEIVED A SCORE OF 4 OR 5 ON THE BENDER VISUAL MOTOR GESTALT TEST (KOPPITZ: EMOTIONAL INDICATORS), TEST 1 AND TEST 2.

		Subjects							
		Experimental (N = 49)				Control (N = 49)			
Change from Test 1 to Test 2		N	Scores			N	Scores		
			5 - 3or2	5 - 4	4 - 3or2		5 - 3or2	5 - 4	4 - 3or2
Improved	N	22 (45%)	5	5	12	26 (53%)	11	6	9
			5 - 5	4 - 4			5 - 5	4 - 4	
No change	N	15 (31%)	4	11		5 (10%)	2	3	
			3or2 - 5	4 - 5	3or2 - 4		3or2 - 5	4 - 5	3or2 - 4
Regressed	N	12 (24%)	4	2	6	18 (37%)	1	13	4

Discussion of the Results

Significant differences between the experimental and control subjects were found in some areas of the AML Behavior Rating Scale and on the Wide Range Achievement Test. Significant differences were also found between boys and girls on the AML total score, and between the ratings on the Bender Visual Motor Gestalt protocols by school psychologists and primary teachers.

AML Behavior Rating Scale

The A subscale, concerned with aggressive behavior symptoms, showed a significant mean difference between the experimental and control subjects on the first and last ratings. The experimental subjects had a higher initial score and a lower final score than the control subjects. Although subsequent analyses of covariance indicated that there were no significant differences between the experimental and control groups, the obtained mean difference may warrant further attention. Part II of this report presents additional data regarding aggressive behavior of experimental subjects. As teachers and parents were helped to develop more effective behavior management skills with PACERS, the social workers reported evidence of improved self-control among PACERS.

The M subscale, concerned with internalized, moody behavior symptoms, showed significant differences over five ratings between the experimental and control subjects of subgroups A_1 and B_1 combined, and between the experimental subjects receiving intensive intervention services and their controls from the same groups. The control subjects scored lower on the M subscale than the experimental subjects. One interpretation for these results might be related to the AML correlation study (see page).

The correlation for the population (N = 4,415) on the M subscale for change (rating 5 minus rating 1) and rating 1 was -.72. The correlation for change with the fifth rating was .52. With the exception of one correlation (r = .52, change with total), these were the two highest correlations obtained on change. It would appear that the ratings on the M subscale tended to change over time for the population; thus, the observation of a difference between the experimental and control subjects on one analysis of variance might reflect a general fluctuation of M scores rather than a real difference between subjects.

Teachers, who form the basis for judging classroom behavior, have long been able to identify children with aggressive, acting out behavior. Although their awareness of symptoms related to withdrawn, moody behavior has improved through the years, more subtle symptoms such as anxiety, depression, or fear are often over looked or attributed to the more simplistic symptoms of restlessness, laziness, or shyness. The PACE social workers may have helped the teachers develop greater interest in and awareness of the causal factors in behavior. As a result, teachers' judgments on the fifth AML rating may have been based on a changed set of values, particularly for PACERS, where understanding of the family milieu and the dynamics of family functioning extended the teacher's perception of these children beyond the classroom. Teachers were helped to develop a concept of understanding behavior rather than reacting to it. While teachers had the opportunity for perceptual change in relation to all children, their focus, through consultation and feedback, was in relation to very specific children, PACERS.

Another interpretation of the higher means on the M subscale for the experimental subjects (A_1 and B_1 and Intensives) has to do with PACERS themselves. Through the process of becoming more aware of self, of developing a more positive self-image, there may have been a shift from the aggressive, acting out behavior of the A subscale to the moody behavior of the M subscale. Evidence of this shift in behavior was marked during the PACE summer activity program. PACERS who were impulsive, aggressive, disruptive, easily provoked and who hit other children began to change as the process of socialization took on meaning for them. Instead of striking out, they sometimes voluntarily left the group to cool off or became angry at themselves and, in turn, cried. As the process of developing inner controls became a reality, there was a shift in observable symptoms. Some of the rise in the M subscale, therefore, may be evidence of more personalized feelings that had an opportunity to be expressed and handled with more understanding. One might expect the M subscale scores to decrease as self-image and confidence continued to improve.

When sex differences on the AML scale were investigated, one analysis revealed that the difference between the number of girls and boys receiving a final total score below 25 points was significant at the .05 level. Of the total number of girls (N = 32) in groups A and B, 62.5% received final total scores below 25 points, whereas only 41% of the boys (N= 100) in the same groups received such scores.

Girls and boys behave in terms of role expectations: boys acting out, girls being more passive. The values stressed by the schools are often more consistent with the personalities of girls, and most teachers, being female, presented an identification model for girls. Many mothers in the project, concerned and frustrated by the behavior of their daughters, were able to develop new and more meaningful relationships with their daughters and, in turn, provideda new model. Very few boys had the opportunity for male identification in school, and many had a poor model at home.

Wide Range Achievement Test

The arithmetic test of the WRAT showed a significant difference in adjusted gains on grade equivalent scores between experimental and control groups from Test 1 to Test 2. Neither group achieved the expected gain of one school year, but the experimental group achieved a higher adjusted gain score (-0.06) than the control group (-0.21).

This trend may be interpreted as indicating better attentional control and concentration, fewer errors in calculations, and generally improved mental organization on the part of the experimental subjects. If we assume that there was proper teaching of arithmetic skills, then an understanding of the broader psychological and social implications of behavior perhaps assisted the teacher in motivating experimental subjects.

The Bender Visual Motor Gestalt Test

All subjects may have been expected to improve in copying the Bender designs because of maturation. There was a significant difference between primary teachers and school psychologists in their judgment of protocols as "Improved," "No change" or "Regression." This can be accounted for, in part, by the fact that the psychologists had training and experience in the use of this test in assessing the perceptual development of children. Teachers rated significantly more protocols as improved than did the psychologists. This perhaps has some implications for teacher training, especially kindergarten and primary teachers. Visual perceptual performance is basic to school success. More experience with the discriminating factors in perceptual development in young children, greater awareness of the multiplicity of causal factors interfering with visual-motor performance, and adequate communication skills to help parents to understand perceptual development seem appropriate and essential elements of a teacher's training.

Improvement in scores on the Koppitz Emotional Indicators may be accounted for, in part, by normal visual-motor development and, in part, by increased exposure to perceptual learning tasks. It is possible that the intervention program helped to hold the line for those experimental subjects who showed no change (11 subjects with a score of 4 - 4), kept them from evidencing more emotional factors, and, in fact, may even have begun to point the way to improvement.

Forty-nine experimental subjects were rated 4 or 5 on the Koppitz Emotional Indicators. Thirty-nine of these subjects and/or their families received extensive or intensive services from PACE social workers. Of this number 22 improved, 10 showed no change and 7 regressed. There is some indication here that the majority of experimental subjects scoring 4 or 5 had serious problems that extended beyond the classroom and were contributing to their learning problems.

The AML Correlation Study

The following report is a preliminary investigation of the correlations obtained between the five AML ratings. The purpose was to observe the interrelationships between items, subtotals, and totals over time. Inter-item, inter-subtotal, and inter-total correlations were obtained for the first and fifth ratings; inter-subtotal and inter-total correlations for A, M, and L on ratings 2 through 4 were obtained; and change scores for rating 5 minus rating 1 were correlated with all items on ratings 1 and 5 and for the subtotal and total scores for ratings 2 through 4.

The sample consisted primarily of 4,415 subjects who were rated five times. However, on rating 1, there were 863 subjects who did not have recorded scores on items one through 10.

It should be noted that most of the correlations were significant at the .05 level; those reaching .165 or above were significantly different from zero at this level. The following discussions, however, will be concerned primarily with correlations of .50 or above. Since a correlation of $\underline{r} = .50$ means that 25% of the variance on one variable is associated with the second variable, it would appear that in the interest of meaning, lower correlations would be less useful. Unless otherwise stated, when the phrase "correlated with" is used in the body of the paper, it will indicate a correlation of .50 or above. Moderate correlations will be considered as those between .50 and .59. Fair correlations will be considered those between .30 and .49, and low correlations will be regarded as below .30. All correlations are appropriate within a treatment setting, for many of the teachers were directly involved in the intervention program. All teachers were considered to be interchangeable judges.

A word of caution is in order concerning the part-whole correlations. It will be remembered that the AML Scale has eleven items, five of which constitute the A subscale; five, the M subscale; and 1, the L subscale. Guilford's statements on uncorrected part-whole correlations are thus appropriate.

> An item-total correlation is a part-whole correlation and is thus spuriously high, because the item's specific and error variances contribute to the correlation as well as its common-factor variance, where only the latter should be tolerated for complete accuracy. The smaller the number of items in a test the more serious is the inflation of $\underline{r}$ from this source (18:502).
>
> . . . .
>
> Assuming statistical significance, uncorrected $\underline{r}$'s are still useful, for they are probably in approximately correct order as to size. Correction would probably not change the order materially. Correction is usually of little importance when tests exceed 20 items in length .... (18:504).

The A Subscale

Rating 1. All of the inter-item correlations for subscale A were at or above $r = .50$. The only correlations with items on the M subscale which were at or above $r = .50$ were for items 7 and 10 ($r = .61$) and for items 7 and 4 ($r = .50$).

Item-subtotal correlations ranged from .81 to .88. The only correlations between the A items and the M subtotal were for items 3 ($r = .53$) and 7 ($r = .59$). The item-total correlations ranged from .73 to .81. The inter-subtotal correlations of A with M reached .76, and the A subtotal correlation with the total was .78.

Rating 5. On the fifth rating, items 1 and 5 correlated at or above .50 with all other items on the A subscale and with items 4 and 10 on the M subscale. Items 3 and 9 correlated with every item on both the A and M subscales except with items 2 and 6. Item 7 correlated with all items on both subscales with the exception of item 6.

Every A item correlated above .50 with the A as well as with the M subtotal. The highest correlations were for item 9 which correlated .90 with the A subtotal and .83 with the total. All item-subtotal, item-total, and subtotal-total correlations were higher than on rating 1.

Discussion. On rating 1, the A subscale was more consistent; that is, the items tended to correlate with each other and not with the M items. No correlation reached .50 with the L item.

On the fifth rating, the A subscale had less consistency, correlating frequently with M items. Items 1 and 5 were the most consistent, correlating with only two M items. Thus, while it might become more difficult to distinguish the aggressive items from the moody items in terms of representation of behavior, the total score became more valid in terms of the items' contribution to that score.

This position is reinforced by the maintenance of a high relationship between the A subtotal and the total score beginning on the second rating and continuing through the fifth; while at the same time the relationships of the A subtotal and the M subtotal were moderately high on the second through fifth ratings. (See Inter-Rating Correlations).

The M Subscale

Rating 1. The M subscale appeared to be less consistent than the A subscale. The inter-item correlations ranged above .40 for all items, with the exception of the correlation between items 2 and 6 which was .38. No inter-item correlations for item 2 reached $r = .50$. Item 4 correlated above .50 only with items 8 and 10, and item 6 correlated .51 with item 8 but did not reach as high a relationship with any other item. Item 8 correlated above .50 with items 4, 6, and 10; while item 10 correlated above .50 only with items 4 and 8. The inter-item correlations between items 2 and 6 and the other items on the M subscale were the lowest obtained for the scale. These correlations ranged from .38 to .51.

Item-subtotal correlations ranged from .69 to .83. Item 2 reached a correlation of .72 with the subtotal score and a correlation of .61 with the total score. The correlation between item 6 and the M subtotal score was .69; between item 6 and the total, _r_ = .53. These were also the lowest correlations for the M subtotal. Item-total correlations were all above .50.

Rating 5. Items 6 and 8 correlated with all items on the M subscale except with item 2. Item 6 did not correlate with any items on the A scale, but item 8 correlated with items 3, 7, and 9 on the A subscale. Item 2 correlated only with items 4 and 10 of the M subscale and with item 7 on the A subscale. Items 4 and 10 correlated with all items on both the A and M subscales.

Every M item correlated with every M subtotal score and with all A and M item-subtotals with the exception of item 6 which correlated .47 with the A subtotal. All inter-subtotal and item-total correlations were higher than on rating 1. Item 2 continued to be a weak item; while item 6 showed a stronger relationship with the M items, with the exception of item 2, and continued to maintain a relationship below .50 with all of the A subscale items.

Discussion. On rating 1, the M items held together less than did the A items. The inter-item correlations were fair to moderate; the item-subtotal and item-total correlations were high. However, all items attained lower correlations than did the A subscale items. Only one M item reached a correlation with the total within the range of the A item-total correlations, and only three items reached a correlation with the subtotal score within the range of the A item-subtotal correlations. Item 10 had a correlation of .83 with the M subtotal and was the highest item-subtotal correlation obtained.

On the fifth rating, the M subscale became even less consistent. Item 6 was the only item which did not correlate with the A subtotal. Item-subtotal and item-total correlations were only slightly higher than on rating 1. Item 10 maintained its high relationship with the M subtotal (_r_ = .89).

The L Subscale

Rating 1. For the most part, item correlations with the L subscale (item 11) ranged in the .30's; none reached _r_ = .50. The correlation between item 11 and the A subscale was .63; for the M subtotal, _r_ = .66; and for the total, _r_ = .55.

Rating 5. Again, the L subscale (item 11) did not correlate above .50 with any item on the A and M subscales or with the subtotal scores. A correlation of .62 with the total was obtained, however.

Discussion. Since item 11 represented a subscale, low correlations could be expected with the other subscales. However, in light of the fact that uncorrected item-total correlations may be spuriously high, the item-total correlations for L, although moderate to moderately high, might have been stronger, thus providing more assurance that the L item contributed as much as did the other items to the validity of the total scale.

Inter-Rating Correlations

Inter-item, item-subtotal, and item-total correlations between rating 1 and rating 5 were extremely low, with none reaching $\underline{r} = .50$ and many being non-significant. The highest correlation was between the total scores ($\underline{r} = .44$).

Item-subtotal correlations were low for ratings 2 and 5 and for ratings 3 and 5 but increased in magnitude for ratings 4 and 5. The highest intercorrelation for these two ratings was for item 9 with the A subtotal ($\underline{r} = .68$). Items 2 and 6 again appeared to be the weakest items. Inter-subtotal and inter-total correlations between ratings 1 and 2, 1 and 3, 1 and 4, 1 and 5 were low to fair and remarkably similar. Inter-subtotal and inter-total correlations between rating 2 and rating 3 and between rating 4 and rating 5 indicated somewhat stronger relationships (see Tables 9 and 10).

Correlations between subtotal and total scores were highest when each rating was correlated with itself. Ratings 2, 3, 4, and 5 were very similar with the correlation between subtotal A and the total ranging from .92 to .93. The M subtotal-total correlations ranged from .86 to .89. The L subtotal correlations ranged from .58 to .62. In no instance did L correlate with the A or M subtotals. In every case, A and M subtotals correlated above .50 with each other (range = .63 to .71) but to a lower degree than with the total scores.

Correlations for subtotal and total scores for rating 1 did not appear to fit the same pattern, for they were both higher and lower than for the other ratings. For instance, the inter-subtotal correlation between A and M was higher than that for the other ratings, the inter-total correlations for A, M, and L were lower than for the subsequent but similar ratings, and the L subtotal correlations were above .50 for A and M (see Table 11). It must be emphasized that even though some of the correlations were lower, they were all considered to be moderate to high.

Discussion. It appears that the reliability (test-retest type) was low to fair with only a few correlations (mainly inter-subtotal) near .50. Ratings 2-3 and 4-5 reached moderate to high relationships for all correlations except for the learning subscale. The second and third ratings and and the fourth and fifth ratings were given in the Fall and Spring, respectively, of two successive school years; therefore, with few exceptions, one teacher provided the scores for each set of ratings. It would appear, then, given the conditions under which the five ratings being discussed were made, that the rater or teacher did make a difference. When used by the same teacher the AML Scale was more reliable; furthermore, the correlations for the two sets of ratings (2-3 and 4-5) were almost identical in magnitude. Experience with the scale appears to increase its reliability.

TABLE 9

CORRELATIONS OF A, M, L, AND T SCORES FOR RATINGS 2 AND 3 (N = 4,415)

		Rating 3			
		A	M	L	T
Rating 2	A	.77	.50	.37	.71
	M	.50	.63	.34	.61
	L	.38	.36	.74	.48
	T	.72	.62	.48	.75

TABLE 10

CORRELATIONS OF A, M, L, AND T SCORES FOR RATINGS 4 AND 5 (N = 4,415)

		Rating 5			
		A	M	L	T
Rating 4	A	.75	.56	.39	.71
	M	.52	.63	.38	.61
	L	.38	.38	.75	.48
	T	.71	.65	.51	.74

TABLE 11

CORRELATIONS OF A, M, L, AND T SCORES FOR FIVE RATINGS (N = 4,415)

Rating 1

	A	M	L	T
A		.76	.63	.78
M			.66	.70
L				.55
T				

Rating 2

	A	M	L	T
A		.63	.42	.92
M			.43	.86
L				.59
T				

Rating 3

	A	M	L	T
A		.67	.46	.93
M			.46	.88
L				.61
T				

Rating 4

	A	M	L	T
A		.69	.42	.93
M			.44	.89
L				.58
T				

Rating 5

	A	M	L	T
A		.71	.48	.93
M			.49	.89
L				.62
T				

Correlations on Change

Inspection of the correlations with change scores (rating 5 minus rating 1) for items on ratings 1 and 5 and for subtotal and total scores for ratings 1 through 5 revealed insignificant and negative relationships which changed over time to correlations of low, positive magnitudes. Correlations were negative for ratings 1 and 2 and positive for 4 and 5. Rating 3 was composed of both positive and negative correlations.

Change on A correlated -.66 with the A subtotal and -.56 with the M subtotal. Other correlations for change on A were below .50. From an inspection of the means (See Appendix A, Table A), the direction of change can be observed. Subjects who received low scores on rating 1 tended to receive higher scores on subsequent ratings.

Change on M correlated -.72 with the M subtotal. Other correlations for change on M were below .50. The direction of change was the same as for change on A. It is interesting to note from the standard deviations for the A and M subscales that the spread of scores was wider along the continuum of scores on the first rating than on any other rating. In other words, there was more variation of subscale scores on the first rating than on subsequent ratings.

Only on rating 1 did the L subscale correlate above .50 with change. In this one instance, the L subscale correlated -.61 with change on L. The change was in the same direction as for the other subscales.

On rating 5, the correlation of change on A with the A subtotal was .33 and with the total, .40. Change on M correlated .52 with the M subtotal and .42 with the total score. Other correlations with change were below .50, except for change on the total which correlated .51 with the A subtotal and .55 with the M subtotal. The correlation of change on the total with the total score was .58.

Again, an inspection of the means provides information about the correlation of change with the M subtotal on rating 5. The mean for rating 5 on the M subscale was higher than for the other ratings. Thus, greater change on the M subscale on rating 5 appears to be associated with higher scores on the same rating.

Correlation of All Items

When items were correlated with each other and time of testing was disregarded, the following results were obtained (Number of items = 25,095):

The A items appeared to be the most stable and consistent. Items 1, 5, and 7 correlated above .50 with all other A items. Items 1 and 5 correlated with item 10, and item 7 correlated with items 4 and 10. The A subtotal was related to the M subtotal ($r = .65$) and with the total ($r = .92$)

On the M subscale Items 2 and 6 both correlated with only two M items and with no A items. Item 4 correlated with all of the M items and with items 3 and 7. Item 8 correlated with 3 M items only; and item 10, with three M items but with every A item. The M subtotal correlated with the total r = .86.

The L subscale (item 11) did not correlate above .50 with any item. L correlated only with the total (*r* = .60).

Items 2, 6, and 11 correlated lower with their respective subtotals and totals than did any of the other items. Item 10 correlated with every item except item 6, therefore, discriminating between subscales less than any other item.

Table 12 presents item, subtotal, and total correlations for 23,095 scores.

Conclusions

1. The first test did not fit the same pattern as did the other tests. The correlations for all subtotals and totals were above .50, however.

2. Rating 1 separated types of behavior (A vs M) more clearly than did rating 5. The scale appeared slightly more valid on rating 5 in terms of higher correlations of items and subtotals with the total.

3. Experience on the part of the teachers with the rating scale and its purposes may have accounted for the somewhat different pattern observed on rating 1. The subjects were also two years younger at the time of the first rating.

4. The M subscale correlated with change above .50 on both the first and fifth ratings; there was greater change on M on rating 1 than on rating 5.

   a. Greater change on rating 1 was associated with lower scores.
   b. Greater change on rating 5 was associated with higher scores.

5. In general, with the exception of the first rating, the L subscale correlated above .50 only with the A and M subtotals and the totals.

6. Items 2 and 6 correlated at or above .50 with the M subtotal and with the totals but showed the most variability of any item on inter-item correlations.

7. On rating 5, items 4 and 10 correlated at or above .50 with every other item on both the A and M subscales. Item 7 correlated at or above .50 with every other item, except item 6.

8. When ratings were disregarded and all items were combined, the A items formed the most consistent subscale.

TABLE 12

CORRELATION MATRIX FOR ITEM, SUBTOTAL AND TOTAL SCORES FOR 25,095 SCORES

	Subscale			Total
Items	L	A	M	T
1	.35	.84	.53	.76
2	.37	.49	.73	.66
3	.44	.87	.55	.81
4	.39	.57	.83	.75
5	.36	.88	.50	.78
6	.30	.39	.68	.57
7	.34	.80	.63	.79
8	.35	.48	.79	.68
9	.37	.89	.55	.81
10	.38	.63	.84	.79
L		.44	.45	.60
A			.65	.92
M				.86
T				

9. Items 2, 6, and 11 demonstrated the weakest relationships with total scores.

10. Item 10 was the least discriminating in terms of the M subscale, per se, because of its relationship to all of the A items.

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APPENDIX A

THE POPULATION

In order to compare the experimental and control groups with the population from which they originated and in order to observe the AML Behavior Rating Scale over time, the members of the population were rated at the same times as were the members of the sample. There were 4,415 subjects, including the experimental and control subjects, who were rated five times over a two-year period. Table A indicates the means and standard deviations for the A, M, L, and total scores for these subjects and the time of testing. Table B presents the means, standard deviations, and standard errors of the mean for the experimental and control subjects of groups A and B. Table C presents the means and standard deviations over five AML ratings for the population according to sex and grade level.

APPENDIX A

TABLE A

MEANS AND STANDARD DEVIATIONS FOR THE A, M, L AND TOTAL SCORES ACCORDING TO POPULATION (N = 4,415) AND TIME OF TESTING

Rating	Time	Subscale	M	S.D.
1	Spring, 1966	A	7.05	4.79
		M	6.35	3.34
		L	1.60	1.16
		T	17.13	6.74
2	Fall, 1966	A	7.70	3.72
		M	6.96	2.77
		L	1.94	1.05
		T	16.60	6.42
3	Spring, 1967	A	8.28	4.04
		M	7.47	3.06
		L	1.93	1.05
		T	17.68	7.09
4	Fall, 1967	A	7.80	3.67
		M	7.13	2.87
		L	1.89	1.02
		T	16.81	6.56
5	Spring, 1968	A	8.19	3.99
		M	7.52	3.12
		L	1.87	1.05
		T	17.59	7.24

APPENDIX A

TABLE B

MEANS, STANDARD DEVIATIONS, AND STANDARD ERROR OF THE MEANS FOR FIVE RATINGS FOR GROUPS A AND B

		Experimental			Control		
Rating	Subscale	M	S.D.	S.E.	M	S.D.	S.E.
1	A	17.58	4.12	0.40	16.60	4.41	0.43
N = 104	M	12.70	4.04.	0.40	12.40	3.34	0.33
	L	3.09	1.19	0.12	3.12	1.23	0.12
	T	33.36	5.71	0.56	31.95	5.56	0.54
2	A	13.37	4.89	0.43	12.88	5.40	0.47
N = 130	M	10.36	3.74	0.33	9.42	3.82	0.34
	L	2.77	1.25	0.11	2.65	1.16	0.10
	T	26.45	7.75	0.68	24.85	8.49	0.75
3	A	13.45	4.77	0.42	13.46	5.24	0.46
N = 130	M	10.55	3.61	0.32	10.11	3.94	0.35
	L	2.75	1.23	0.11	2.57	1.16	0.10
	T	26.75	7.95	0.70	26.14	8.74	0.77
4	A	12.91	5.59	0.49	12.30	5.23	0.46
N = 130	M	10.92	8.47	0.74	9.18	3.60	0.32
	L	2.56	1.15	0.10	2.61	1.30	0.11
	T	25.45	8.78	0.77	24.08	8.56	0.75
5	A	12.69	5.19	0.46	12.99	5.21	0.46
N = 130	M	10.46	4.20	0.37	10.08	3.94	0.35
	L	2.77	1.22	0.11	2.68	1.28	0.11
	T	25.91	9.35	0.82	25.76	8.91	0.78

APPENDIX A

TABLE C

MEANS AND STANDARD DEVIATIONS OVER FIVE RATINGS ON AML SCALE FOR POPULATION (N = 4,415) ACCORDING TO SEX AND GRADE LEVEL

		Subscale							
		A		M		L		T	
Grade	Sex	M	S.D.	M	S.D.	M	S.D.	M	S.D.
K	M	9.30	4.07	7.65	2.76	1.89	0.97	18.81	6.50
	F	7.53	3.13	7.32	2.76	1.63	0.84	16.47	5.71
1	M	8.87	4.31	7.55	3.10	2.00	1.05	18.38	7.25
	F	7.09	3.36	6.91	2.64	1.76	0.99	15.71	5.85
2	M	9.06	4.39	7.54	3.03	2.10	1.11	18.62	7.35
	F	6.95	3.01	6.81	2.53	1.73	0.95	15.41	5.36
3	M	8.97	4.42	7.59	3.67	2.00	1.13	18.40	7.42
	F	6.79	2.81	6.76	2.61	1.74	0.98	15.26	5.34
4	M	8.94	4.33	7.64	3.40	2.07	1.12	18.52	7.68
	F	6.88	2.98	6.89	2.83	1.76	0.96	15.52	5.85
5	M	8.82	4.26	7.63	3.20	2.04	1.10	18.50	7.50
	F	7.05	3.21	7.09	2.73	1.81	0.99	15.96	5.99
6	M	9.07	4.08	7.88	3.21	2.03	1.08	18.96	7.38
	F	7.23	3.13	7.26	2.79	1.75	0.90	16.25	5.87

Pupil ____________________

Sex ____________

Date of Rating _____________

I. D.	B. D.	MF	R#	D	S	G	S	T

A)M(L BEHAVIOR RATING SCALE

PLEASE RATE THIS PUPIL'S BEHAVIOR AS YOU HAVE OBSERVED AND EXPERIENCED IT: THIS PUPIL -

		Seldom or Never (1)	Not Very Often (2)	Often (3)	Most of the Time (4)	All of the Time (5)	
(A) 1.	Gets into fights or quarrels with other pupils	☐	☐	☐	☐	☐	1.___
(M) 2.	Has to be coaxed or forced to work or play with other pupils	☐	☐	☐	☐	☐	2.___
(A) 3.	Is very restless	☐	☐	☐	☐	☐	3.___
(M) 4.	Is unhappy or depressed	☐	☐	☐	☐	☐	4.___
(A) 5.	Enjoys disrupting class discipline	☐	☐	☐	☐	☐	5.___
(M) 6.	Becomes sick when faced with a difficult school problem or situation	☐	☐	☐	☐	☐	6.___
(A) 7.	Is very obstinate	☐	☐	☐	☐	☐	7.___
(M) 8.	Is overly sensitive to criticism	☐	☐	☐	☐	☐	8.___
(A) 9.	Is very impulsive	☐	☐	☐	☐	☐	9.___
(M) 10.	Can be very moody	☐	☐	☐	☐	☐	10.___
(L) 11.	Has difficulty learning	☐	☐	☐	☐	☐	L___

A___

M___

T___

(1962): Office of the San Mateo County Superintendent of Schools,
590 Hamilton, Redwood City, California 94063

(1967): PACE I. D. Center, 363 El Camino Real
South San Francisco, California 94080

PART II

ANALYSIS OF PROJECT-BASED DATA

ASSESSMENT OF FAMILY FUNCTIONING

The Case Management Schedule. The Case Management Schedule was used by social workers to assess the areas of family functioning for use in determining alternative treatment goals. The first schedule was completed within the first six months of the project and the second schedule was completed in May of 1968, more than one year after the first schedule.

The schedule included the following areas:

1. Child Functioning
   Factors: physical condition, intellectual and emotional status, personality characteristics, attitude toward parents, attitude toward siblings and social functioning.
2. Adult Functioning
   Factors: physical conditions, intellectual and emotional status, personality characteristics, social functioning.
3. Child Rearing
   Factors: physical care, affectional attitude, parental expectations, parental training and guidance.
4. Financial Functioning
   Factors: occupational capacity, physical, mental and emotional factors, attitude toward job and/or work, attitude toward dependents, management of income.

Each area was checked with regard to

1. No significant problems
2. Moderate problems
3. Severe problems
4. No information

The descriptive guidelines for each of the factors and the family problem level are included in The Case Management Schedule. Appendix B.

Tables 1 through 4 show the incidence of families rated by social workers in each of the areas of family functioning and the degree of family problem - from not significant (1), moderate (2), to severe (3) on each of two ratings.

In Table 1, almost twice as many families were seen as having severe problems in the area of child functioning on the second assessment as on the first.

TABLE 1

CASE MANAGEMENT SCHEDULE: AREA OF CHILD FUNCTIONING. INCIDENCE OF FAMILIES AND DEGREE OF FAMILY PROBLEM AS RATED BY SOCIAL WORKERS AT THE BEGINNING AND END OF INTERVENTION.

	Degree of Family Problem							
	Rating I				Rating II			
	1	2	3	0	1	2	3	0
SW_1	8	10	4	3	9	7	6	3
SW_2	15	19	2	1	16	15	4	2
SW_3	6	18	4	3	14	12	4	1
SW_4	8	18	5	0	5	17	9	0
SW_5	3	19	1	9	4	16	7	5
Total N=156	40	84	16	16	38	67	30	11

Table 2 is concerned with the incidence of adult functioning.

TABLE 2

CASE MANAGEMENT SCHEDULE: AREA OF ADULT FUNCTIONING. INCIDENCE OF FAMILIES AND DEGREE OF FAMILY PROBLEM AS RATED BY SOCIAL WORKERS AT THE BEGINNING AND END OF INTERVENTION.

	Degree of Family Problem							
	Rating I				Rating II			
	1	2	3	0	1	2	3	0
SW_1	11	10	1	3	6	13	3	3
SW_2	15	20	1	1	19	14	2	2
SW_3	17	8	2	4	20	7	2	2
SW_4	15	12	4	0	10	14	7	0
SW_5	10	12	1	9	10	6	7	5
Total N=156	68	72	9	17	65	54	21	12

More than twice as many families were seen as having severe problems in adult functioning on the second rating as on the first.

Table 3 is concerned with child rearing.

TABLE 3

CASE MANAGEMENT SCHEDULE: AREA OF CHILD REARING. INCIDENCE OF FAMILIES AND DEGREE OF FAMILY PROBLEM AS RATED BY SOCIAL WORKERS AT THE BEGINNING AND END OF INTERVENTION.

	Degree of Family Problem							
	Rating I				Rating II			
	1	2	3	0	1	2	3	0
SW_1	11	9	1	4	6	13	3	3
SW_2	13	23	0	1	15	20	0	2
SW_3	11	14	2	4	10	17	2	2
SW_4	13	15	3	0	8	12	11	0
SW_5	8	12	2	10	7	13	7	5
Total N=156	57	75	11	19	47	57	26	12

In Table 3, more than twice as many families were rated as severe in child rearing on the second rating as on the first rating.

Table 4 is concerned with the financial functioning. Very few families were found to have severe problems in this area.

TABLE 4

CASE MANAGEMENT SCHEDULE: AREA OF FINANCIAL FUNCTIONING. INCIDENCE OF FAMILIES AND DEGREE OF FAMILY PROBLEM AS RATED BY SOCIAL WORKERS AT THE BEGINNING AND END OF INTERVENTION.

	Degree of Family Problem							
	Rating I				Rating II			
	1	2	3	0	1	2	3	0
SW_1	18	2	1	4	16	5	1	3
SW_2	30	6	0	1	32	3	0	2
SW_3	22	4	1	4	23	4	2	2
SW_4	27	4	0	0	17	2	2	0
SW_5	18	4	0	10	19	6	2	5
Total	115	20	2	19	107	20	7	12

The number of families with severe financial problems tripled from the first rating to the second. Even so, there were few families with financial problems. Industrial accidents and divorce accounted for much of the shift.

The shift from no significant problems or moderate problems to severe problems in the other areas of family functioning can be accounted for in a number of ways. Families who are not on welfare or who have not yet asked for assistance with family problems seem to have adequate defenses to cope with day to day contacts with school personnel. It was not until the social worker had had an opportunity for greater contact with the family that the severity of the family problems became evident. Those families rated as severe at the end of the project in one or more areas can be considered High Risk families whose children will need continued understanding and support if they are to experience success in school.

A total of 38 families were rated as severe in one or more areas of family functioning. This represents more than 25% of the experimental subjects.

Glueck Predictive Indices. The six indices developed by the Gluecks (7) as predictive factors in juvenile delinquency were used as a further check by social workers on family functioning. The six areas and the factors checked in each area were: (Definitions of predictive factors - p.64)

1. Discipline by father
    - Firm but kindly
    - Erratic
    - Overstrict
    - Lax
    - No information

2. Discipline by mother
    - Firm but kindly
    - Erratic
    - Overstrict
    - Lax
    - No information

3. Supervision by mother
    - Suitable
    - Fair
    - Unsuitable
    - No information

4. Affection of mother for child
    - Warm
    - Indifferent
    - Hostile
    - No information

5. Affection of father for child
    - Warm
    - Indifferent
    - Hostile
    - No information

6. Cohesiveness of family
    - Marked
    - Some
    - None
    - No information

The six areas were checked at the time of initial parent contact and again after more than a period of one year, at the conclusion of intervention, in May of 1968. Table 5, discipline by father, shows that more fathers were seen by social workers as being firm but kindly in disciplining their children at the time of the second rating. Thirteen percent were seen as overstrict in their discipline.

TABLE 5

SOCIAL WORKERS FIRST AND SECOND RATINGS OF FAMILY FUNCTIONING ON THE GLUECK PREDICTIVE INDICES: DISCIPLINE BY FATHER.

	Firm but kindly Rating		Erratic Rating		Overstrict Rating		Lax Rating		No information Rating	
	1	2	1	2	1	2	1	2	1	2
SW_1	5	8	0	1	10	8	5	5	5	3
SW_2	11	13	14	13	3	3	1	0	8	8
SW_3	13	19	4	5	3	2	4	2	7	3
SW_4	10	9	11	12	4	3	4	4	2	3
SW_5	7	5	5	8	4	6	9	6	7	7
Total	46	54	34	39	24	22	23	17	29	24

CHANGE FROM RATING 1 to RATING 2 ON DISCIPLINE BY FATHER.

	Regression	No Change	Improved
SW_1	1	15	4
SW_2	4	18	6
SW_3	3	15	5
SW_4	4	14	10
SW_5	6	11	6
Total	18 (11%)	73	31 (19%)

Table 6, discipline by mother, shows that approximately one third of the mothers were seen as firm but kindly, and one third were seen as erratic in their discipline of children.

TABLE 6

SOCIAL WORKERS' FIRST AND SECOND RATINGS OF FAMILY FUNCTIONING ON THE GLUECK PREDICTIVE INDICES: DISCIPLINE BY MOTHER.

	Firm but kindly Rating		Erratic Rating		Overstrict Rating		Lax Rating		No information Rating	
	1	2	1	2	1	2	1	2	1	2
SW_1	5	5	9	10	2	4	5	3	4	3
SW_2	15	22	17	9	0	1	1	2	4	3
SW_3	10	14	7	10	1	0	9	5	4	2
SW_4	11	11	10	9	6	6	4	5	0	0
SW_5	5	8	13	14	3	1	6	4	5	5
Total	46	60	56	52	12	12	25	19	17	13

CHANGE FROM RATING 1 TO RATING 2 ON DISCIPLINE BY MOTHER.

	Regression	No Change	Improved
SW_1	4	12	5
SW_2	2	20	10
SW_3	4	14	8
SW_4	6	19	6
SW_5	3	17	7
Total	19 (12%)	82	36 (22%)

Table 7, supervision by mother, shows that 62% of the mothers were seen as providing suitable supervision for their children. Less than 5% were seen as providing unsuitable supervision at the time of Rating 2.

TABLE 7

SOCIAL WORKERS' FIRST AND SECOND RATINGS OF FAMILY FUNCTIONING ON THE GLUECK PREDICTIVE INDICES: SUPERVISION BY MOTHER.

	Suitable Rating		Fair Rating		Unsuitable Rating		No information Rating	
	1	2	1	2	1	2	1	2
SW$_1$	7	6	7	16	7	0	4	3
SW$_2$	29	31	4	3	0	0	4	3
SW$_3$	18	21	7	6	2	2	4	2
SW$_4$	24	20	5	9	2	2	0	0
SW$_5$	17	20	3	4	7	3	5	5
Total	95	98	26	38	18	7	17	13

CHANGE FROM RATING 1 TO RATING 2 ON SUPERVISION BY MOTHER.

	Regression	No Change	Improved
SW$_1$	1	13	7
SW$_2$	0	31	1
SW$_3$	5	14	7
SW$_4$	6	23	2
SW$_5$	2	19	6
Total	14 (8%)	100	23 (14%)

Table 8, affection of mother for child, shows that social workers perceived 71% of the mothers as showing warmth and affection for their children at the time of the second rating. Fewer than 10% were seen as hostile.

TABLE 8

SOCIAL WORKERS' FIRST AND SECOND RATINGS OF FAMILY FUNCTIONING ON THE GLUECK PREDICTIVE INDICES: AFFECTION OF MOTHER FOR CHILD.

	Warm Rating		Indifferent Rating		Hostile Rating		No information Rating	
	1	2	1	2	1	2	1	2
SW_1	16	20	3	2	2	0	4	3
SW_2	29	30	4	3	0	1	4	3
SW_3	24	27	0	0	3	2	4	2
SW_4	22	21	6	5	3	5	0	0
SW_5	18	23	2	2	7	2	5	5
Total	109	121	15	12	15	10	17	13

CHANGE FROM RATING 1 TO RATING 2 ON AFFECTION OF MOTHER FOR CHILD.

	Regression	No Change	Improved
SW_1	0	18	3
SW_2	1	29	2
SW_3	1	23	2
SW_4	6	21	4
SW_5	1	19	7
Total	9 (6%)	110	18 (11%)

Table 9, affection of father for child, shows that 64% of the fathers expressed warmth and affection for their children.

TABLE 9

SOCIAL WORKERS' FIRST AND SECOND RATINGS OF FAMILY FUNCTIONING ON THE GLUECK PREDICTIVE INDICES: AFFECTION OF FATHER FOR CHILD.

	Warm Rating		Indifferent Rating		Hostile Rating		No information Rating	
	1	2	1	2	1	2	1	2
SW_1	13	17	3	1	3	4	6	2
SW_2	23	24	6	4	0	2	8	7
SW_3	22	26	0	1	2	1	7	3
SW_4	20	16	0	8	0	4	2	3
SW_5	13	17	6	4	6	4	7	7
Total	91	100	24	18	11	15	30	23

CHANGE FROM RATING 1 TO RATING 2 ON AFFECTION OF FATHER FOR CHILD.

	Regression	No Change	Improved
SW_1	0	17	2
SW_2	2	24	2
SW_3	1	21	1
SW_4	7	20	1
SW_5	2	17	4
Total	12 (7%)	99	10 (6%)

Table 10, cohesiveness of family, shows that more than one-third or 38% of the families were seen as having the quality of marked cohesiveness, 7% as having none.

TABLE 10

SOCIAL WORKERS' FIRST AND SECOND RATINGS OF FAMILY FUNCTIONING ON THE GLUECK PREDICTIVE INDICES: COHESIVENESS OF FAMILY.

	Marked Rating		Some Rating		None Rating		No information Rating	
	1	2	1	2	1	2	1	2
SW_1	3	4	13	15	5	3	4	3
SW_2	9	5	23	27	1	2	4	3
SW_3	22	26	4	3	1	0	4	2
SW_4	14	13	17	14	0	4	0	0
SW_5	12	12	13	12	2	3	5	5
Total	60	60	70	71	9	12	17	13

CHANGE FROM RATING 1 TO RATING 2 ON COHESIVENESS OF FAMILY.

	Regression	No Change	Improved
SW_1	1	17	3
SW_2	6	24	2
SW_3	1	21	4
SW_4	8	18	4
SW_5	3	22	2
Total	19 (12%)	102	15 (9%)

Summary of Glueck Predictive Indices. Discipline of the child by the father was seen as overstrict in 14% of the families. Mothers were seen as more erratic in their discipline practices than fathers. Twenty-two percent of the mothers and 19% of the fathers improved in their discipline practices. Twelve percent of the mothers and 11% of the fathers regressed in their practices.

Supervision of the child by the mother was perceived as suitable in 62% of the families. Fourteen percent improved and 8% regressed during the course of intervention.

Sixty-four percent of the fathers and 71% of the mothers were seen as being warm in their affection for the child. Eleven percent of the mothers and 6% of the fathers showed improvement in this area. Seven percent of the fathers and 6% of the mothers regressed.

Family cohesiveness was seen as a marked family quality in 38% of the families. Seven percent were seen as showing no cohesiveness. Nine percent of the families improved in this area, 12% regressed.

Where no information was available, there may have been no father, or mother, in the home, some families were not worked with directly, and others moved to a too distant geographical area to be followed.

In general, most PACER parents were seen as caring for their children and providing them with adequate supervision. Areas of behavior management (discipline) by mothers and fathers were less favorable but showed the most improvement. In general, mothers seemed more accessible and amenable to positive change than fathers.

Cohesiveness, an important factor, showed a few more families regressing than improving. There was some element of cohesiveness, however, in 83% of the families, a good omen for positive change in family functioning.

As with the Case Management Schedule, at the time of the first rating there had been only an initial family contact by social workers. Regression in anyone area may not, therefore, be a true regression but an indication of the fact that the particular area was better known to the social worker at the time of the second rating. Family defenses had perhaps been lowered.

DEFINITIONS OF PREDICTIVE FACTORS

1., 2. DISCIPLINE OF MOTHER (FATHER)

Refers to usual discipline of the child on the part of the parent or of a parent surrogate, if the child has lived with the latter at least since the child was three years old.

FIRM BUT KINDLY: Discipline based on sound reason which the child understands and accepts as fair.

ERRATIC: Parent vacillates between strictness and laxity; is not consistent in control.

OVERSTRICT: Parent is harsh, unreasoning, demands obedience through fear.

LAX: Parent is negligent, indifferent, lets child do what he or she likes. In cases in which one or another parent has left or has been removed from the home before the child was three years old, and there is no parent surrogate (step-parent, foster parent), discipline of the missing parent is graded as lax.

3. SUPERVISION BY MOTHER

SUITABLE: If mother does not work outside the home and is not ill, she personally keeps close watch on the child or provides for his leisure hours in clubs and playgrounds; if she is ill or out of the home a great deal, there is a responsible adult in charge.

FAIR: Mother, though home, gives only partial supervision to child.

UNSUITABLE: Mother is careless in her supervision, leaving the child to his own devices without guidance, or in the care of an irresponsible person.

4., 5. AFFECTION OF MOTHER (FATHER) FOR CHILD

WARM (including overprotective): Sympathetic, kind, attached, even overprotective.

INDIFFERENT: Does not pay much attention to child, relationship is neither warm, overprotective, or hostile.

HOSTILE: Rejects child.

6. COHESIVENESS OF FAMILY

MARKED: There is a strong "we" feeling among members of the immediate family as evidenced by cooperativeness, group interests, pride in the home, affection for each other.

SOME: Even if the family group may not be entirely intact (because of absence of one or more members), the remaining group has at least some of the characteristics of the cohesive family.

NONE: Home is just a place to "hang your hat": self-interest of the member exceeds group interest.

EARLY INTERVENTION: developing criteria for assessment of social workers' perceptions of children and their problems.

There are two major concerns among those who share responsibility for the welfare and education of young children: 1. how best to determine which children may need special help; 2. how best to provide effective services when they are needed.

In evaluating the PACE I. D. Center project, it appeared that an important corollary to the objective data obtained about the child in school was an investigation of the social workers' perceptions of childrens' problems, the possible causes and the focus of services for effective intervention.

Prior to engaging in direct services within the school and home environment, the social workers were instructed to record information about the child at school, at home and in the community that would be important for case evaluation. The first comprehensive summary of case material was brought together at the clinical conference where it was used as a basis for determining alternative treatment goals for PACERS and their families. The clinical conference included the social worker, the mental health consultant and the assistant director of the project (a social worker who served to coordinate the efforts of the five caseworkers).

Subsequent to the clinical conference, additional information about a child was added to the case record and was useful in determining a work plan and the final summary of each case. Social workers were encouraged to keep their records to a minimum. Therefore, the quantity and quality of the information gathered was determined by each worker. Some were rather prolific writers, others recorded only understatements of events. Usually children and families to whom the most help was given provided more opportunity and greater incentive for recording information. It is essentially these records of 80 PACERS, or fifty one percent of the experimental subjects, that provided the data for this section of the project evaluation.

This sample included the PACERS ranked by the social workers as the five most improved and the five least improved in their respective caseloads. It also included the five most and the five least improved PACERS with respect to their first and last AML ratings, when sufficient descriptive data also was available. The analysis was carried on by an independent researcher[1], unfamiliar with the school population, the communities served, the social workers, and the project, but experienced in the methodology of content analysis.

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[1] Dr. Adena Joy, Berkeley, California.

Characteristic Description of PACERS' Problems

The major categories used by social workers in describing their PACERS are identified in Table 11.

TABLE 11

MAJOR DESCRIPTIVE TERMS FROM EIGHTY CASE RECORDS AND THE INCIDENCE OF REFERENCE TO THEM BY FIVE SOCIAL WORKERS (SWs)

Descriptive Terms	Incidence of Reference by Social Workers					Percentage of Total Cases (N=80)
	SW_1 (N=14)	SW_2 (N=17)	SW_3 (N=18)	SW_4 (N=16)	SW_5 (N=15)	
Aggressive (defiant-hyperactive-restless)	11 (78%)	11 (64%)	1 (5%)	9 (56%)	9 (68%)	51%
Slow learner or underachiever	6 (42%)	9 (53%)	6 (33%)	7 (43%)	6 (40%)	42%
Withdrawn (isolate-passive-shy)	4 (28%)	4 (23%)	5 (27%)	6 (37%)	2 (13%)	26%
Immature (babyish)	0 (0%)	2 (11%)	5 (27%)	4 (25%)	2 (13%)	16%

Most PACERS were described as predominantly aggressive, (51%) and/or either slow learners or underachievers (42%). The basis for a social worker's perception of a child's behavior was: 1) direct observation in the classroom, on the playground, at home; 2) teacher ratings on the AML Behavior Rating Scale, comments, and notes in the cumulative record; 3) parent comments.

It will be noted that SW_3 described only one child as aggressive, attributing what other social workers might have referred to as aggressive behavior to immature or withdrawn behavior. This discrepancy may be one of semantics, for SW_3 described some children as "defying authority" or "being disruptive", perhaps implying aggression. This is sufficiently different from the other social workers use of the term aggression so that it may be considered significant in developing what will be referred to as a social worker's "style."

It must be kept in mind that PACERS were from among the high-scoring (negative), top ten percent of over 6,000 children rated by classroom teachers on the AML Behavior Rating Scale. At the time of the initial screening, school behavior and/or learning were realistic problems for these children.

Characteristic Description of Causation

The category of causation was established and the content of the descriptive data analyzed in an effort to determine what the social workers perceived as the causes of the problems that children evidenced. In some reports the causes were stated explicitly, while in others they were implied. The implication was then used as a basis for judgment in determining assignment to a specific category.

Four general, causative references used by social workers are identified in Table 12.

TABLE 12

GENERAL CAUSAL FACTORS ASCRIBED BY SOCIAL WORKERS TO EIGHTY CASES WITH SCHOOL PROBLEMS

Causal Areas	Incidence of Reference by Social Workers					Percentage of Total Cases (N=80)
	SW$_1$ (N=14)	SW$_2$ (N=17)	SW$_3$ (N=18)	SW$_4$ (N=16)	SW$_5$ (N=15)	
Parents (home)	11	15	13	15	12	
	(78%)	(88%)	(72%)	(94%)	(80%)	85%
Physical	2	5	7	6	8	
	(14%)	(29%)	(38%)	(37%)	(53%)	35%
Psychological	5	4	0	1	3	
	(35%)	(23%)	(0%)	(6%)	(20%)	16%
Teacher (school)	2	1	2	1	1	
	(14%)	(5%)	(11%)	(6%)	(6%)	8%

All SWs perceived the parents as being primarily responsible for the child's problems. References from the descriptive data that were assigned to the parents (home-family) included such statements as -

- They (parents) are unable to accept normal responses (behavior) of the children at various growth levels.

- (father) was highly arbitrary and dominating; (mother) responded by withdrawal; the children were caught in conflict and responded with confusion and lack of respect for the mother; responded to the father out of fear of punishment.

The school was seldom mentioned as a causal factor. The school was deemed a causal area in seven cases where teachers were referred to as:

- vague and disorganized.
- not interested in taking any responsibility for PACER's performance but continually complains about the lack of interest and involvement on the part of the mother.
- having very little to give of herself in the classroom. Her interest is to rid herself of this PACER.
- having "open warfare" with the PACER.

Physical causes included such references as:

- neurological handicap colors every aspect of her performance.
- tendency to act babyish --- related to her medical problem.
- asthma is due to emotional conditions.
- speech difficulty continued to be a problem.

SW3 never referred to psychological factors. SW4 mentioned them only once. SW1 referred to psychological causal factors in 35% of the cases but seldom alluded to physical causation. Social workers varied considerably in the degree to which they included psychological factors within the child as contributing to his school problems. The usual pattern was to describe the family-home environment or the child's physical characteristics so that the child seemed to be viewed as being primarily "acted upon." Occasionally, however, the child himself was described as having a personal problem because he "mistrusts everyone", "is afraid of failure", "reacts to sibling rivalry", or "resents step-sister's protective attitude toward him." This type of description was classified as psychological.

Characteristic Foci of Services for Effective Intervention

The descriptive casework data did not adhere to any systematic outline of the nature of each SW's intervention procedure or technique. Included here, therefore, is what each SW perceived as the essential focus for intervention - the intervention that actually took place as well as the intervention that the SW felt was indicated.

Characteristic foci for intervention are noted in Table 13.

TABLE 13

INCIDENCE OF REFERENCE BY SOCIAL WORKERS TO ACTUAL OR PRESCRIBED INTERVENTION

Areas of Intervention	Incidence of Reference by Social Workers					Percentage of Total Cases
	SW$_1$ (N=14)	SW$_2$ (N=17)	SW$_3$ (N=18)	SW$_4$ (N=16)	SW$_5$ (N=15)	(N=80)
Parent Education	8 (57%)	11 (64%)	7 (38%)	10 (62%)	7 (46%)	53%
Special Class Placement	2 (14%)	5 (29%)	4 (22%)	4 (25%)	4 (26%)	23%
Diagnostic Evaluation Psychological	2 (14%)	0 (0%)	7 (38%)	8 (50%)	2 (13%)	23%
Physical	1 (7%)	0 (0%)	2 (11%)	3 (18%)	3 (20%)	11%
Therapy: child/ parent	4 (28%)	6 (35%)	0 (0%)	2 (18%)	2 (13%)	17%
Child Activity	3 (21%)	3 (17%)	2 (11%)	4 (25%)	0 (0%)	15%
Parent-Teacher Cooperation	2 (14%)	0 (0%)	0 (0%)	1 (9%)	3 (30%)	7%
School-Teacher Education	2 (14%)	0 (0%)	2 (11%)	0 (0%)	0 (0%)	5%

Parent education was seen as the principal focus for intervention - all SWs making explicit this significant area for 53% of the cases. Parent education, as an area of intervention in this project, does not refer to the traditional parent education courses established by school districts under Adult Education programs. Rather, parent education refers to the process of intervention with family members by social workers, and being of assistance to them in such areas as child-rearing practices, behavior management, family planning, information about and referral to appropriate community agencies (legal, marital, medical, rehabilitation). It refers also to providing opportunities for parents to meet with other parents to discuss the content, meaning and relevance of special programs that included films on child development and behavior management, "Plays for Living"[2], professional guest consultants.

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[2] "Plays for Living". A community education program; live professional theater, sponsored by the Greater Bay Area Council of Family Service Agencies.

The need for more definitive, diagnostic evaluation, physical and/or psychological, of the child's problems as a basis for decision making was included by all but SW_2. Here some of the problems of content analysis became evident, for SW_2 did refer a significant number of cases (35%) to appropriate agencies for therapy. (This kind of reference was seen by the researcher as a referral for treatment. Diagnosis was not mentioned explicitly by SW_2). Special class placement was seen as a significant intervention area by most SWs. From these 80 families, 10 children were placed in special classes.

Child activity includes reference to such statements as:

- encourage child to develop motor skills, swimming, join Brownies.
- encourage mother to let PACER join Boys' Club
- encourage PACER to be more involved and take some responsibility for what goes on at home.

Although the area of the school and, more specifically, teacher education were not noticeably present in the descriptive casework data, they were important areas of the intervention process. For instance, SW_4 refers frequently to a need for "structure", for "setting limits" for a child. It is doubtful that she kept this thought to herself - but rather communicated it in a meaningful way to teachers and to parents. SW_3 saw many of her PACERS as immature and "infantilized" with more time needed for maturation and more opportunity for development. Certainly both parents and teachers were cued in to these needs. Intervention is often a subtle, almost unconscious process, that seems so simple in retrospect that it goes unnoticed and unmentioned. Where there was mention of teacher education or parent-teacher cooperation, one can assume that these were especially difficult areas of intervention around specific cases.

Alerting the school to a PACER's need for individual attention, encouraging parents to transfer a PACER to another school, suggesting a PACER be considered for special class placement - these were considered areas of school intervention.

Characteristic Criteria of Progress or Improvement

The category of criteria of progress or improvement was included because it appeared that social workers had somewhat different orientation or expectations among themselves with regard to areas of improvement. The researcher attempted to establish categories for a child's progress by analyzing the attention or significance each social worker gave to certain criteria of improvement.

Most of the measures of success mentioned in the descriptive data can be subsumed under progress in academic achievement, social behavior, physical health, or psychological maturity. Table 14 shows the significant areas established as criteria of improvement with the incidence of reference by respective social workers.

TABLE 14

INCIDENCE OF REFERENCE BY SOCIAL WORKERS TO SIGNIFICANT CRITERIA OF IMPROVEMENT

Criteria of Improvement	Incidence of Reference by Social Workers					Percentage of Total Cases (N=80)
	SW$_1$ (N=14)	SW2 (N=17)	SW3 (N=18)	SW$_4$ (N=16)	SW$_5$ (N=15)	
Academic	9 (64%)	7 (41%)	7 (38%)	9 (56%)	5 (33%)	46%
Social	8 (57%)	9 (53%)	5 (27%)	10 (62%)	5 (33%)	46%
Psychological	2 (14%)	9 (53%)	11 (61%)	7 (43%)	6 (40%)	43%
Physical	1 (7%)	1 (5%)	0 (0%)	5 (31%)	3 (20%)	11%

References to academic, social and psychological factors were seen as generally significant criteria of improvement. SW$_1$ and SW$_4$ made more reference to academic and social criteria, SW3 to psychological (personal, self-concept) criteria, and SW$_2$ to social and psychological criteria. SW$_5$ appeared to effect a balance of attention over all criteria.

The needs of children and families determined to a large extent the references to these criteria in the descriptive data. At the same time, the determination and selection of areas needing attention, and the energy expended in meeting these needs within the child's total environment, appeared to be a function of the social worker's own perception of the problem, competencies, and ability to make effective use of self as the child's advocate. The barriers to achieving this within the school and community agency systems are enormous, but not insurmountable. It is suggested that reference to these criteria reflect the areas in which the social worker felt most secure, and in which the most effective work was accomplished.

Selection of Dimensions for Family Assessment

A variety of factors have been studied by different researchers interested in assessing the family milieu. Although there is considerable overlap there are also differences in points of emphasis.

A large-scale research program at the Fels Research Institute was subjected to cluster analysis and produced four major categories of Warmth, Democracy, Intellectuality and Indulgence.(1)

Sears, Maccoby and Levin(2) identified the following areas:

1. Permissiveness-strictness
2. General family adjustment
3. Warmth of mother-child adjustment
4. Responsible child training orientation
5. Aggressiveness and punitiveness

Statistical analysis of the Parental Attitude Research Instrument developed by Schaefer and Bell indicated that two major dimensions for consideration were "acceptance-rejection" and "autonomy-control." (3)

Other writers have dealt with concepts which can be subsumed under "maternal rejection."(4) Overprotection is often seen as a form of rejection(5); it may take the form of dominance leading to dependency, or indulgence leading to infantalization.(6)

The choice of variables to be included in the analysis of PACER families was dictated to a large degree by the type of information generally available from the social workers' written reports. For instance, they seldom commented on the qualities of warmth or intellectuality in the relationship between the parents and the child; therefore, these variables were not included as such, although they are implied in some of the other factors. There was frequent reference to the parents' attitudes toward the child's education and discipline; these factors are included.

Four Dimensions of Family Functioning

Four dimensions were established to identify different aspects of family functioning. They are not mutually exclusive. The researcher's analysis is based upon the descriptive data from the social workers' reports and, therefore, is subject to all of the fallacies implicit in forming a subjective judgment. We can assume some credence from reports by experienced, professional social workers. The four dimensions are:

Dimension I. Parental feelings toward their children:

VERY REJECTING ⟵ REJECTING ⟵ ACCEPTING ⟶ OVERPROTECTIVE ⟶ OVER OVERPROTECTIVE

Dimension II. Parental relationships to their children as expressed through discipline and expectations:

VERY STRICT ⟵ STRICT ⟵ AUTONOMY ⟶ OVERPERMISSIVE OR IGNORING ⟶ VERY OVERPERMISSIVE OR IGNORING

Dimension III. Parental attitudes toward the child's development and education:

VERY PUNITIVE ← PUNITIVE ← RESPONSIBLE → INDULGENT → VERY INDULGENT
TRAINING

Dimension IV. Interfamilial interaction or general family adjustment.

VERY RIGID ← RIGID ← COHESIVE → DISORGANIZED → VERY DISORGANIZED

One limitation in assigning families to the four dimensions rested in the fact that in some instances one parent was described as "soft," while the other was described as "hard." In these cases little weight was given, therefore, to the quality or nature of the poor adjustment, but rather to the general family functioning.

In a few cases, there appeared to have been rather drastic changes in the family environment over the two year period. If improvement or deterioration appeared to be due to intrafamilial factors unrelated to PACE, e.g., divorce, industrial accident, then the final family situation was considered.

The extreme categories referred to in this analysis are as follows:

Dimension I. very rejecting --- very overprotective
Dimension II. very strict --- very (overpermissive
(ignoring
Dimension III. very punitive --- very indulgent
Dimension IV. very rigid --- very disorganized

The extremes of overprotective, overpermissive: ignoring, indulgent, and disorganized have been assigned a quality of "softer" or less," perhaps more viable or accessible to change than the extremes of rejecting, strict, punitive, and rigid.

Table 15 shows the distribution of families, by social workers, assigned to extreme categories on the four dimensions. Only 5% of the families in Table 15 were rated in the extreme category on all four dimensions. Forty percent (six) of the families of SW_5 were placed in the extreme category on three or four dimensions. SW_4 had no families assigned to more than two extreme categories. Reference to TABLE V shows that 50% of the families were perceived as functioning within what might be called the usual limits. They were not seen as functioning within the extreme categories.

TABLE 15

DISTRIBUTION OF FAMILIES ASSIGNED TO EXTREME CATEGORY IN THE FOUR DIMENSIONS OF FAMILY FUNCTIONING, BY SOCIAL WORKER.

Social Worker	Distribution of Families in Extreme Category on Four Dimensions					
			Dimensions			
	N	IV	III	II	I	None
1	14	1	1	2	4	6
2	17	0	3	3	2	9
3	18	1	0	2	5	10
4	16	0	0	4	5	7
5	15	2	4	0	1	8
Total	80	4	8	11	17	40
%	100%	5%	10%	14%	21%	50%

If we investigate further the dimensions in which 50% of the families were seen as belonging in one or more extreme category, we can perhaps begin to see a different picture with regard to social worker style. Tables 16 through 19 deal with each of the four dimensions and the distribution of families in each category, by social worker.

TABLE 16

DISTRIBUTION OF EIGHTY FAMILIES BY SOCIAL WORKER ON DIMENSION I OF FAMILY FUNCTIONING

Social Worker	N	Dimension I Very Rejecting	Rejecting	Accepting	Over-protective	Very over-protective
1	14	1	5	3	3	2
2	17	1	4	5	5	2
3	18	1	2	7	7	1
4	16	0	5	7	3	1
5	15	2	7	2	3	1
Total	80	5	23	24	21	7
%	100%	6%	29%	30%	26%	9%

In Table 16, SW_3 was seen as identifying parents as predominantly overprotective (44%); SW_5 identified parents as predominantly rejecting (60%). Fifty-five percent of the families were assigned to the rejecting-overprotective categories, 30% were seen as accepting, and 15% fell in the extremes.

TABLE 17

DISTRIBUTION OF FAMILIES BY SOCIAL WORKER ON DIMENSION II OF FAMILY FUNCTIONING

		Dimension II				
Social Worker	N	Very Strict	Strict	Autonomy	Ignoring/Over permissive	Very ignoring/ overpermissive
1	14	0	8	1	3	2
2	17	1	7	2	3	3
3	18	3	1	6	8	0
4	16	1	6	2	4	3
5	15	3	4	2	4	2
Total	80	8	26	13	22	10
%	100%	10%	33%	16%	28%	13%

In Table 17, SW_3 was seen as identifying parents as predominantly permissive:ignoring (44%); SW_1 and SW_2 identified parents as essentially strict, 55% and 47% respectively. Thirty-three percent of SW3's families were assigned to the category of autonomy. Sixty-one percent of the families were assigned to the strict-overpermissive:ignoring categories, 16% were seen as permitting autonomy of behavior, and 23% fell in the extremes.

TABLE 18

DISTRIBUTION OF FAMILIES BY SOCIAL WORKER ON DIMENSION III OF FAMILY FUNCTIONING

		Dimension III				
Social Worker	N	Very punitive	Punitive	Responsible Training	Indulgent	Very Indulgent
1	14	1	6	2	3	2
2	17	1	6	3	3	4
3	18	0	2	7	6	3
4	16	0	9	2	4	1
5	15	4	2	2	5	2
Total	80	6	25	16	21	12
%	100%	8%	31%	20%	26%	15%

In Table 18, SW_3 was seen as identifying parents as predominantly indulgent (50%), with only 11% seen as punitive. Twenty-six percent of SW_5's families were seen as very punitive, 24% of SW_2's families as very indulgent.

Fifty-seven percent of the families were assigned to punitive-indulgent categories, 20% were seen as developing responsible training, and 23% fell in the extremes.

TABLE 19

DISTRIBUTION OF FAMILIES BY SOCIAL WORKER ON DIMENSION IV OF FAMILY FUNCTIONING

Social Worker	N	Dimension IV				
		Very Rigid	Rigid	Cohesive	Disorganized	Very Disorganized
1	14	2	2	4	1	5
2	17	3	5	5	0	4
3	18	2	1	9	3	3
4	16	2	6	2	2	4
5	15	5	2	4	2	2
Total	80	14	16	24	8	18
%	100%	18%	20%	30%	10%	22%

In Table 19, SW_5, SW4, SW_2 were seen as identifying parents as predominantly rigid, 46%, 50% and 47% respectively. SW_3 was seen as working with families who were essentially cohesive in character (50%).

Thirty percent of the families were seen as cohesive, 30% as rigid or disorganized, and 40% fell in the extremes.

(See Appendix B for further analysis of 32 extreme families)

Thirty-two families were assigned to the extreme categories of Dimension IV, very rigid or very disorganized. These families represent the potential hard core members of the community. They are the families who very probably will take up a disproportionate amount of agency staff time and of the taxpayers money. All social workers seemed to recognize more readily the extremes in this dimension, a most crucial one in identifying children who will have greater difficulty in realizing their potential, in school and in society. These children are included among those of High Risk.

Social worker styles became more apparent as the content of their descriptive casework data was analyzed. SW_3 was "softer" in her descriptions, giving the family the benefit of the doubt, observing most of them as overprotective, overpermissive and indulgent toward their children. Few children were referred to as having aggressive behavior, but rather as being slow learners, immature, depressed or withdrawn. SW_3 personalized her approach and seemed more comfortable dealing on a one-to-one level.

SW_5 was somewhat "harder" in her descriptions, perceiving families as very strict, rejecting, very punitive and/or very rigid. She saw children as essentially aggressive in their behavior. More of SW_5's families were placed in the extreme category.

SW_4 also tended toward the "hard" categories, but seldom used the extremes, except on Dimension IV. Families were accepting of their children for the most part but were strict, punitive and rigid.

SW_1, giving emphasis to academic and social criteria, saw families as strict, rigid and punitive, but did not use the extremes except on Dimension IV, very disorganized.

SW_2 took a middle of the road path. Most families were seen as strict, no families were seen as disorganized, but the extremes of very disorganized and very rigid were used, as well as very indulgent.

The ability to perceive the central causal factors in the dynamics of family functioning that were contributing to a child's problem, and then to deal directly or indirectly with the significant adults in the child's environment, including the teacher, was the essence of intervention. The goals were established, the alternative actions studied, and a sustained course of action was developed to provide the necessary continuity of interaction among the concerned adults and the child. Each social worker performed these tasks in her own style. Awareness of one's own style is perhaps better understood by social workers, by virtue of their training, than it is by teachers or school administrators.

The implications of this brief analysis for teacher training are obvious. What is this teacher's "style" doing to or for this child?

Degree of Intervention Services to Subjects and/or Families.

At the termination of casework services to families, social workers were asked to rate their cases in terms of the degree or intensity of their intervention services during the two year period. Intensive casework was defined as highly concentrated, in-depth service offered to subjects and/or families for varying lengths of time. Extensive casework was defined as a high degree of service consistently offered. Moderate or minimal casework was defined in terms of decreasing need for services or as supportive assistance.

Tables 20 and 21 show the distribution of cases by grade level according to the intensity of the intervention services. In Table 20, 29% of the subjects were offered extensive or intensive services, 16% received no direct service.

TABLE 20

SOCIAL WORKERS' RATINGS OF THE DEGREE OF
DIRECT CASEWORK PROVIDED SUBJECTS BY
GRADE LEVEL.

Grade Level	None	Minimal	Moderate	Extensive	Intensive	
K	11	9	40	15	2	
1	7	8	18	1	5	
2	5	6	8	3	5	
3	0	1	3	3	2	
4	1	1	1	1	0	
Total	24	25	70	23	14	156
%	16%	16%	45%	14%	9%	

In Table 21, casework to families, 49% received extensive or intensive services, 10% received none.

TABLE 21

SOCIAL WORKERS' RATINGS OF DEGREE OF DIRECT CASEWORK PROVIDED FAMILIES OF SUBJECTS, BY GRADE LEVEL.

Grade Level	None	Minimal	Moderate	Extensive	Intensive
K	9	10	22	27	9
1	6	4	8	13	8
2	1	7	6	9	4
3	0	1	3	4	1
4	0	2	0	2	0
Total	16	24	39	55	22
%	10%	15%	25%	35%	14%

There were two reasons for no direct services being offered to a subject and/or his family.

1. The school did not see the subject as having a problem and the social worker concurred.

2. The parent did not wish to participate and did not want the child to participate in any direct intervention.

These cases remained a part of the social workers' case loads and consultant services or indirect services were offered to the teacher and other school personnel. In 13 cases there were no services to subjects or their families. Nine of these cases have complete data and are included in Group A in the statistical analysis. They evidenced spontaneous or gradual adjustment in all but two cases as shown in Table 22.

In Table22, it will be noted that all but two subjects have Average to Superior Intelligence Quotients as measured by one of the several group tests administered. All children achieved at or beyond the expected gain in reading. There are three children who will bear watching because of the fact that they are rated High Risk or Medium Risk on the Bender Visual Motor Gestalt Test. Emotional factors may interfere with their learning. If the discrepancy between reading and arithmetic scores for subject #17 increases, he may experience some rather serious learning problems. This disorganization pattern is perhaps being reflected in his high AML score on the fifth rating.

TABLE 22

CHANGES ON THE AML RATING SCALE, THE WRAT[1], THE BENDER GESTALT TEST AND THE DAP[2] FOR NINE SUBJECTS WHO DID NOT RECEIVE DIRECT INTERVENTION SERVICES.

Subject	Grade[5]	Sex	AML Scale Rating	A 5-25	M Range 5-25	L 1-5	Total 11-55	WRAT Read. (Adjusted Gain)[3]	WRAT Sp.	WRAT Arith.	Bender-Gestalt Test 1	Bender-Gestalt Test 2	Draw a Person Test 1	Draw a Person Test 2
1			1	23	5	5	33	.2	-.3	.2	HR[6]	HR	LR	LR
			2	13	5	5	23							
	K2		3	11	15	4	30							
		F	4	14	10	4	28	IQ = 95[4]						
17			1	19	11	3	33	1.1	-.9	-.6	MR	LR	MR	LR
	2		2	9	6	2	17							
			3	12	11	2	25							
		M	4	10	10	3	23	IQ = 101						
			5	18	14	3	35							
128			1	14	23	5	42	1.6	.02	.7	MR	LR	LR	LR
	1		2	7	6	2	15							
			3	7	6	2	15							
		M	4	5	5	1	11	IQ = 89						
			5	5	5	1	11							
			1	18	14	2	34							
154			2	5	6	1	12	.0	.1	.1	HR	MR	LR	LR
	K1		3	5	6	1	12							
			4	7	5	1	13	IQ = 117						
		M	5	7	9	1	17							
			1	10	15	2	27							
61			2	6	10	2	18	.5	.1	-.1	HR	HR	LR	LR
	K2		3	5	7	2	14							
		F	4	5	5	3	13	IQ = 105						
			1	15	17	3	35							
165			2	9	11	3	23	1.6	1.1	.6	MR	MR	LR	LR
	K1		3	12	9	3	24							
		M	4	5	5	2	12	IQ = 133						
			5	9	8	2	19							
			1	15	16	1	32							
101			2	9	9	2	20	.9	-.3	.6	LR	LR	LR	LR
	1		3	12	16	2	30							
		M	4	6	5	1	12	IQ = 91						
			5	7	7	1	15							
			1	19	7	1	27							
79			2	5	5	1	11	.4	-.1	.6	LR	LR	LR	LR
	1		3	6	5	1	12							
		F	4	7	7	1	15	IQ = 123						
			5	5	5	1	11							
			1	17	10	2	29							
190			2	7	9	1	17	1.8	.4	.5	MR	LR	LR	LR
	1		3	15	7	1	23							
			4	10	6	2	18							
		M	5	9	5	2	16	IQ = —						

Note:
1. Wide Range Achievement Test.
2. Draw a Person.
3. Adjusted Gain - above or below expected gain.
4. Group I.Q.: not associated with the WRAT.
5. Grade at time of initial screening.
6. HR = high risk
MR = medium risk
LR = low risk

Data for 20 cases receiving intensive services are documented in Table 23.

In contrast to the nine subjects in Table22, most of the 20 subjects reveal a stormy and difficult school experience thus far. The AML Total scores and the learning scores reveal considerable fluctuation. In general, where the teachers perception of a subject's learning is rated low, the total score drops. When learning becomes a problem, the total score goes up. In some instances, when a teacher seems to be able to accept a learning problem and perhaps understands the child's limitations, behavior improves.

Perhaps the expectations and pressures have been lessened. The AML Scale points up one area of great concern to teachers. Presumably a child has settled down, seems to be doing better but then something sets him off again and all the gains seem to be lost. It takes a sensitive and aware teacher not to react to these setbacks in learning and behavior in a despairing or punitive way. The children among these 20 are undoubtedly evidencing distress that reflects problems at home. The stress builds up and there are cues for the observing teacher to see. The feedback to the teacher from the social worker's family contacts and a shared and consistent concern for the child are the stabilizing factors. They are essential if he is to experience any school success.

TABLE 23

CHANGES ON THE AML RATING SCALE, THE WRAT[1] THE BENDER GESTALT TEST AND THE DAP[2] FOR 20 SUBJECTS WHO RECEIVED INTENSIVE INTERVENTION SERVICES.

				AML Scale				WRAT			Bender Gestalt Test		Draw-a-Person Test	
Subject	Grade[3]	Sex	Rating	A 5-25	M Range 5-25	L 1-5	Total 11-55	Read. (Adjusted Gain)[4]	Sp.	Arith.	1	2	1	2
			1	20	18	3	41	.1	.4	-.7	MR[6]	HR	LR	LR
108			2	18	10	2	30							
			3	14	10	3	27							
	2		4	21	19	2	42	IQ = 75[5]						
		M	5	24	19	3	46							
# 26			1	15	16	5	36							
			2	10	12	3	25							
	2		3	17	20	3	40	-1.3	-1.2	-.7	LR	LR	LR	LR
			4	11	13	3	27							
		M	5	21	19	5	45	IQ = 91						
			1	19	14	5	38							
129			2	17	7	4	28	-.7	-.3	-.1	LR	HR	—	—
			3	15	9	2	26							
	1		4	17	20	3	40	IQ = 73						
		M	5	20	18	5	43							
*#			1	21	23	4	48							
175			2	19	13	4	36	-.8	-.7	-.1	HR	HR	LR	LR
	K		3	12	14	5	31							
			4	15	15	5	35	—						
		M	5	19	17	5	41							
*#			1	20	12	4	36							
259			2	11	8	2	21	-.6	-.3	-1.2	LR	LR	LR	LR
			3	16	10	2	28							
	1		4	23	15	3	41	IQ = —						
		M	5	20	15	3	38							
*			1	25	19	5	49							
24			2	16	11	5	32	.3	.0	1.1	HR	MR	LR	LR
	2		3	19	14	5	38							
			4	13	11	3	27	IQ = 100						
		M	5	19	12	5	36							
			1	15	11	1	27							
29			2	16	9	1	26	-1.0	-.8	-.3	LR	LR	LR	LR
	2		3	17	12	2	31							
			4	17	13	2	32	IQ = 93						
		F	5	19	14	2	35							

Note: 1. Wide Range Achievement Test
2. Draw-A-Person
3. Grade at time of initial screening
4. Adjusted gain: above or below expected gain
5. Group I.Q.: not associated with WRAT

6. HR = high risk
MR = medium risk
LR = low risk

TABLE 23 continued

Subject	Grade	Sex	AML Scale					WRAT			Bender Gestalt Test		Draw-a-Person Test	
			Rating	A 5-25	M 5-25	L 1-5	Total 11-55	Read.	Sp.	Arith. (Adjusted Gain)	1	2	1	2
			1	21	15	2	38							
4			2	15	9	2	26	.2	.4	.0	MR	MR	LR	LR
			3	10	10	1	21							
	2		4	12	13	3	28							
		M	5	15	17	3	35	IQ=109						
			1	22	18	3	43							
13			2	14	16	4	34	.9	.6	.3	LR	LR	LR	LR
	2		3	16	15	2	33							
			4	7	10	4	21	IQ=86						
		M	5	13	16	4	31							
*65			1	24	20	5	49							
			2	22	22	4	47							
	3		3	23	17	5	45	.4	.2	1.5	HR	HR	LR	LR
			4	12	12	2	26							
		M	5	14	14	3	28	IQ= —						
*#			1	23	5	5	33							
11			2	13	5	5	23							
			3	15	11	4	30	-.1	.6	-.2	HR	HR	LR	LR
	K		4	14	10	4	28							
		M						IQ= —						
*256			1	23	9	4	36							
			2	12	8	3	23	.2	.3	1.3	LR	HR	LR	LR
			3	13	8	3	24							
	K		4	6	7	3	16							
		M	5	14	10	3	27	IQ= —						
*249			1	21	9	3	33							
	K		2	16	8	4	28	-.6	-.6	-.7	HR	MR	MR	LR
			3	15	5	4	24							
		F	4	17	5	4	26	IQ=101						
			1	12	14	2	28							
105			2	6	5	1	12							
	1		3	8	5	1	14	-.8	-.3	.5	MR	LR	LR	LR
			4	14	11	2	27							
		M	5	12	11	3	26	IQ=100						
			1	18	9	2	29							
103			2	15	7	2	24							
			3	11	6	2	19	1.7	-.4	-.1	MR	LR	LR	LR
	1		4	15	6	2	23							
		M	5	11	5	2	18	IQ=83						
			1	16	10	1	27							
58			2	16	5	2	23	.5	-.1	-.1	MR	LR	LR	LR
	1		3	18	12	2	32							
			4	17	8	3	28							
		M	5	11	5	1	17	IQ=112						

TABLE 23 continued

Subject	Grade	Sex	Rating	AML Scale				WRAT			Bender Gestalt Test		Draw-a-Person Test	
				A 5-25	M 5-25	L 1-5	Total 11-55	Read. (Adjusted Gain)	Sp.	Arith.	1	2	1	2
136	K	F	1	22	14	2	38							
			2	13	10	2	25							
			3	18	12	2	32	-.5	.1	-.1	HR	LR	LR	LR
			4	23	13	2	38							
			5	9	6	2	17	IQ= 103						
95	K	F	1	16	15	3	34							
			2	10	7	1	18	.3	-.5	.7	HR	MR	LR	LR
			3	16	16	3	35							
			4	5	9	2	16	IQ = 66						
# 83	1	F	1	18	15	5	36							
			2	9	14	4	27							
			3	10	13	3	26	.1	.1	.5	HR	LR	LR	LR
			4	7	14	5	26							
			5	6	7	3	16	IQ= —						
# 119	1	M	1	25	16	4	45							
			2	13	19	2	34							
			3	12	11	3	26	.0	.0	.1	MR	LR	LR	LR
			4	12	10	3	25							
			5	7	5	2	14	IQ = 73						

* = Special class placement: N=7
# = Retained N= 6

PACE I.D. Center Summer Activity Program (8)

High school, college students and credentialed teachers (N=23) served as counselors during a five weeks summer activity program in 1967 and checked PACERS (N=98) daily on mental health criteria. The items used were taken from Dr. Barbara Biber's chapter "Mental Health Principles in the School Setting."(9) The seven criteria were listed on a three by five card and each item was rated on a five point scale as follows:

	-Check One-				
	+				-
Goals for a healthy personality:	1	2	3	4	5
1. Positive feeling toward self					
2. Realistic perception of self and others					
3. Relatedness to people					
4. Relatedness to environment					
5. Independence					
6. Curiosity and creativity					
7. Recovery and coping strength					

KEY: 1= most positive behavior
5= least positive behavior

Counselors were instructed in the use of the mental health criteria rating card by PACE social workers during the staff orientation session.

Prior to the program, PACERS were placed in three behavior categories, "aggressive," "withdrawn," and "other," for purposes of grouping. As might be expected, children with differing behaviors responded differently to the kinds of experiences provided during the summer program. Figure 1 reports the weekly mean total scores for each of the behavior groupings. The "other" children evidenced an expected group process behavior from initial testing to gradual leveling off and, in turn, improvement.

The mental health criteria were also used effectively as a basis for staff discussion and in-service training.

A comprehensive report of the program was published in 1967. The summary and conclusions from that report follow:

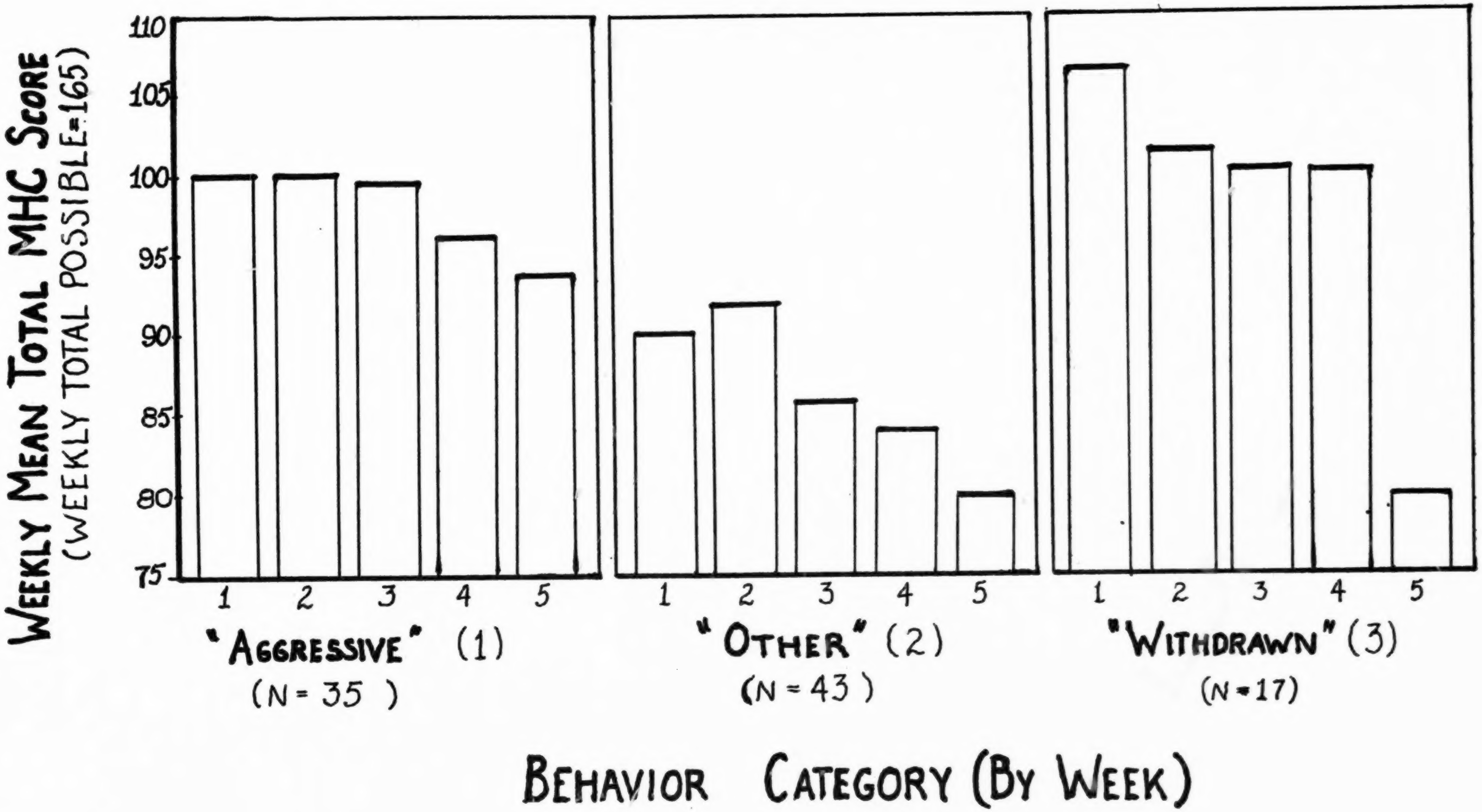


Figure 1. Weekly mean MENTAL HEALTH CRITERIA ratings for each behavior category.

PACE I.D. Center Summer Activity Program

SUMMARY and CONCLUSIONS : Summer Program

- It was possible to provide an effective socialization experience for young children within a five week activity-oriented summer program.

- With planning and an experienced staff, it was possible to involve a substantial number of parents in such a program. (45% of those whose children participated)

- It was possible to provide a rich experience in adult-child and adult-adult relationships for high school and college students, teachers and administrators, as well as the PACE I. D. Staff.

- A significant number of PACERS participated in the summer program. (73%)

- The two major areas of child behavior that parents hoped would show gains from the summer program were: getting along with other children and gaining self-confidence.

- A significant number of PACERS attending the summer program showed positive gains. (72% of those attending)

- PACERS showed more disturbed behavior than had been anticipated.

- PACERS who tended to be "withdrawn", "fearful", "moody" showed the greatest gains in:
    - positive feelings toward self
    - relatedness to environment
    - independence

- PACERS who tended toward "aggressive" behavior showed the greatest gains in:
    - relatedness to people
    - recovery and coping strength

- All PACERS showed gains in:
    - independence
    - recovery and coping strength
    - positive feelings toward self

- It was possible to demonstrate that individual and group child therapy strategies were applicable and effective with this sample of young children.

- The activity group summer program was an effective intervention technique.

- Opportunities for staff planning, communication, consultation and process evaluation were essential to the program.

Teacher Survey: April 1969

All elementary teachers in the core participating districts, kindergarten through sixth grade, were sent a survey form. (Appendix). Three hundred and seventy-eight surveys were sent out, there were 208 returns, or 54%. Twenty-one were received too late for inclusion in this report.

On the basis of the returns, teachers were assigned to three groups:

Group I (N = 82)	Teachers who had one or more PACERS in their classrooms during the intervention program.
Group II (N = 31)	Teachers who did not have a PACER in their classrooms but who did participate directly with the PACE social worker in activities such as case conferences, consultation.
Group III (N = 34)	Teachers who reported no direct contact with PACE program. Evaluation of program based on hearsay or observation.
Group IV (N = 40)	No comment: new teachers, no contact.

Question 1. How would you rate the PACE I. D. Center program on the basis of your own experience?

	Excellent	Fair	Poor or Impossible
Group I	57%	26%	17%
Group II	58%	31%	11%
Group III	47%	23%	30%

Question 2. Of what value do you think the PACE program has been to - (see following page)

Question 3. How many children do you have in your classroom this year whom you feel have behavior and or learning problems that require more help than you can give to effect change?

	Number of Children per classroom			
	None	1 - 2	3 - 4	5 plus
Number of Teachers	5	38	43	29

Question 2. Of what value do you think the PACE program has been to -

	GROUP I		GROUP II		GROUP III	
	very valuable of some value	no value	very valuable of some value	no value	very valuable of some value	no value
a. you	70%	29%	70%	29%	17%	82%
b. PACERS	80%	9%	58%	6%	47%	14%
c. PACER parents	73%	13%	54%	6%	44%	11%
d. other parents	32%	29%	35%	18%	15%	23%
e. other teachers	50%	14%	54%	18%	44%	11%
f. principal	53%	10%	58%	9%	32%	5%
g. community	53%	8%	61%	6%	50%	8%

Question 4. What do you believe would be of most help to you and to parents in assisting a child with problems to experience more success?

Item	Number of Teachers
time: to discuss to plan	69
assistance in classroom (aides)	64
special learning materials	50
evaluation of problem	74
consultation when needed	87

Discussion of Teacher Survey.

The survey was conducted one year after direct intervention services for PACERS and their families were terminated. The results of the survey would seem to indicate rather clearly that the majority of teachers, whether they were directly responsible for PACERS or not, felt positively about the program. They were aware of its impact in the community, the principal, other teachers, PACER parents and PACERS.

The survey also reveals a cry for help from the classroom teacher. Teachers checked consultation available at a time when it is needed, evaluation of the child's problem, time to discuss and plan for the child with special needs, assistance in the classroom (teacher aides), and special learning materials.

Most teachers have three to four children in their classrooms who need more help than the teacher can give.

Improvement - a relative term.

The cases of two PACERS will be presented in order to show that the process of attempting to change a child's chances for success in school or in life is extremely complex. The concept of improvement depends to a large extent upon who is making the judgment, based on what factual and/or intuitive data, and at what particular point in time.

One PACER, J., made the least improvement on the AML Scale from rating 1 to rating 5. J.'s social worker checked him as the PACER in her caseload who had made the most improvement.

B. made the most improvement on the AML Scale from rating 1 to rating 5.

Both PACER families received intensive services and both participated in the summer activity program.

Both PACERS were in kindergarten at the time of initial screening.

	PACER J.		PACER B.	
AML Scale:	A scale	16	A scale	23
Spring 1966	M scale	9	M scale	14
Kindergarten	L scale	3	L scale	1
	Total	28	Total	38

Repeating Kindergarten at time of screening. Described as dull, apathetic, bland. Referred to psychologist. Recommended for placement in educationally handicapped class. Medical evaluation revealed mild seizures. On medication. Gives up easily, cries if he doesn't win, falls apart with too much attention. Angry, hostile, fights, bad language. Tells stories about violence and death. Disorganized thought, little affect.

AML Scale:	Fall 1966	Spring 1967
A	19	12
M	18	13
L	5	3
Total	43	28

Bright, obstreperous boy. First grade teacher could see no good in "this potential delinquent." Only help teacher wanted was to "get him out of here." Mother seen as "uninterested" and "irresponsible." Moved to another school district and was with a mature, interested teacher. B.'s attitude and behavior improved.

AML Scale:	Fall 1966	Spring 1967
A	25	15
M	14	13
L	1	1
Total	40	29

Bi-lingual home. Step-father. Both parents work. J. spent great deal of time at the babysitters. J. seemed to get very little consistent attention, love or discipline at home. Mother tended to minimize J.'s difficulties. As problems at school and in neighborhood increased, mother able to spend more time with J. in evening. Medication not given consistently. Mother hospitalized for brief period with mental breakdown. Everything piled in on her. 1967 PACE summer activity program provided a socialization experience for J. Counselor's record on July 11th, "At the drop of a hat he hits, bites and swears at other children and at me. Recovery is poor. Low frustration tolerance level. When I attempt to talk to him he clams up and resorts to crying, baby talk or grumbling." On August 11, "Excellent last day. J. played well with other children and didn't have any serious fights."

AML Scale:	Fall 1967	Spring 1968
A	25	22
M	21	18
L	4	5
Total	50	45

J. placed in class for educationally handicapped in Fall of 1967. Although still perceived as a problem by the teacher, she has helped to provide some of the structure and consistency he needs. Special class placement has meant three different schools for J.

No father, but many strengths in the home. Mother interested and involved but so immersed in supporting the household, attending the physical needs of children, plus enjoying her romances that she was impulsive and inconsistent with children. Moved to eliminate commute problem, to give B. a new start in school. Was able to find good babysitter and also get a better job.

Fall of 1967, transferred to another school in same district. Principal "zeroed in" on B. became his friend, clarified expectations, "sat down" on him for infractions. Limits were set. Mother could not follow through with agency referral, but was able to follow through with Boys' Club. B. went most everyday. Staff worked with him well. Mother able to provide cohesiveness. Children knew they belonged.

AML Scale:	Fall 1967	Spring 1968
A	11	7
M	8	5
L	2	1
Total	21	13

The adults were recipients of service. No direct help to B. Perhaps he is over the hump - but any stressful or anxiety-producing situation may set him back. The main source of consistent and appropriate control for B was the school.

	Grade Equivalent Score	
	Test 1	Test 2
	Grade 1	Sp.Class*
WRAT: Reading	K5	1.3
Spelling	1.1	K9
Arith.	K1	K9

*should be in grade 3.

Case Management Schedule:

Severe problems noted in Child Functioning; moderate to severe problems in Areas II and III. No financial problems.

Glueck Predictive Indices

Discipline by father improved from Lax to Erratic. Mother's discipline erratic. Some family cohesiveness noted, but minimal.

	Grade Equivalent Score	
	Test 1	Test 2
	Grade 1	Grade 2
WRAT: Reading	1.4	2.4
Spelling	1.1	2.6
Arith.	2.1	3.2

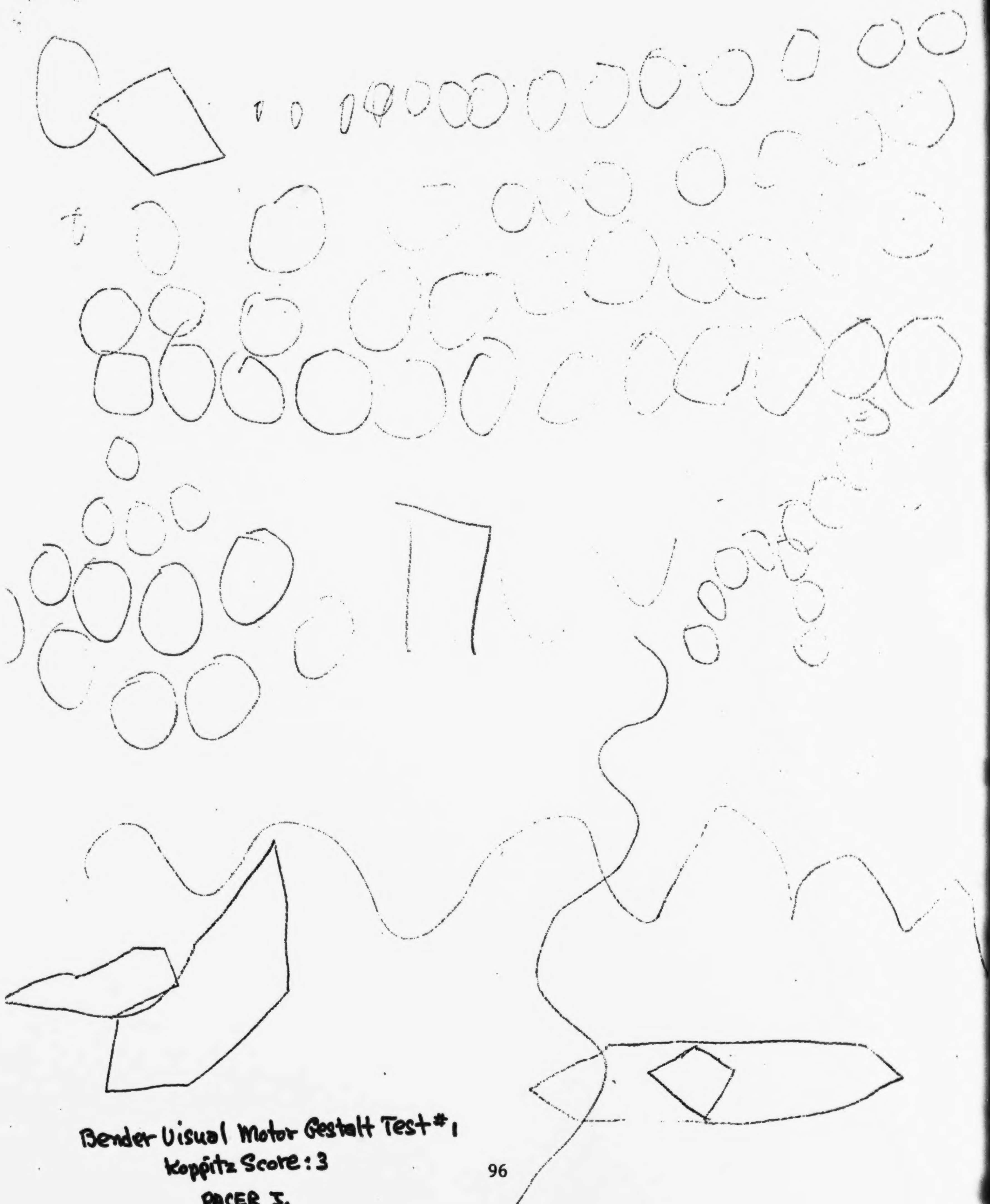
Case Management Schedule:

Moderate problems in all areas.

Glueck Predictive Indices

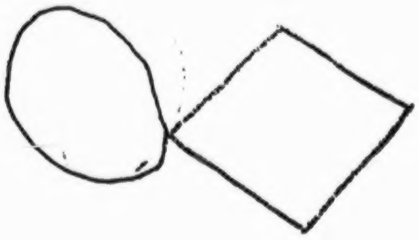
Some improvement in discipline and supervision by mother.

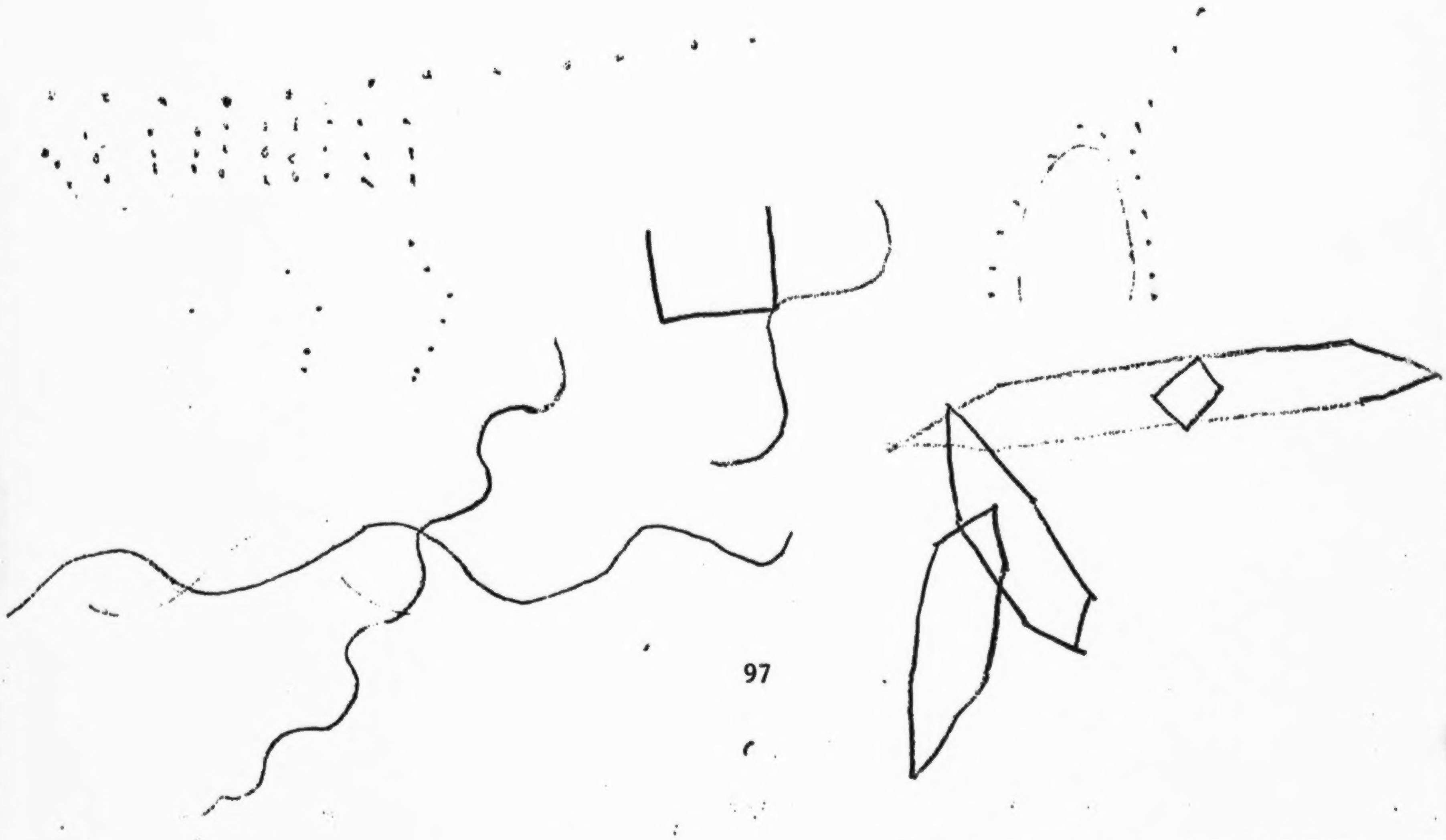
"Their ships bob up and down and in and out of their harbor - but they are together"

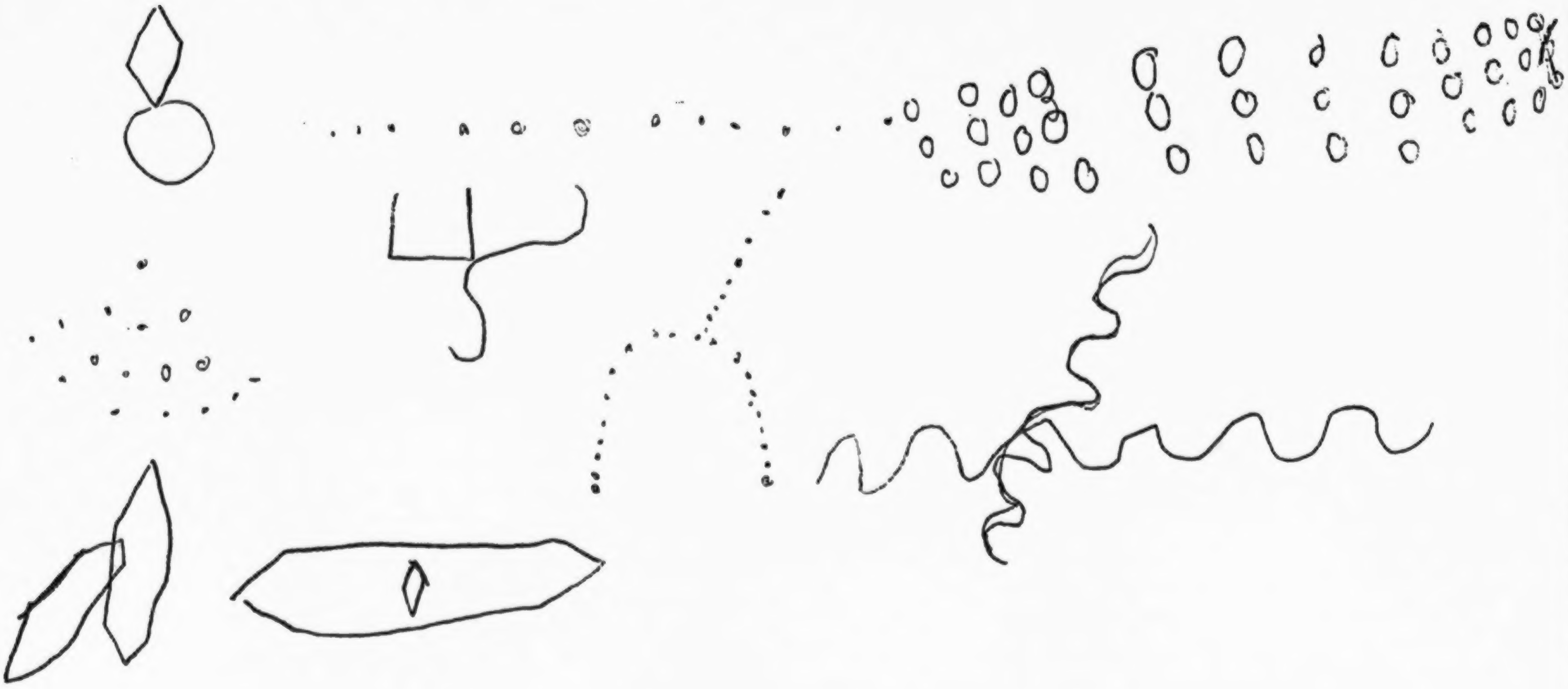


Bender-Visual Motor Gestalt Test #1
Koppitz Score: 3
PACER J.

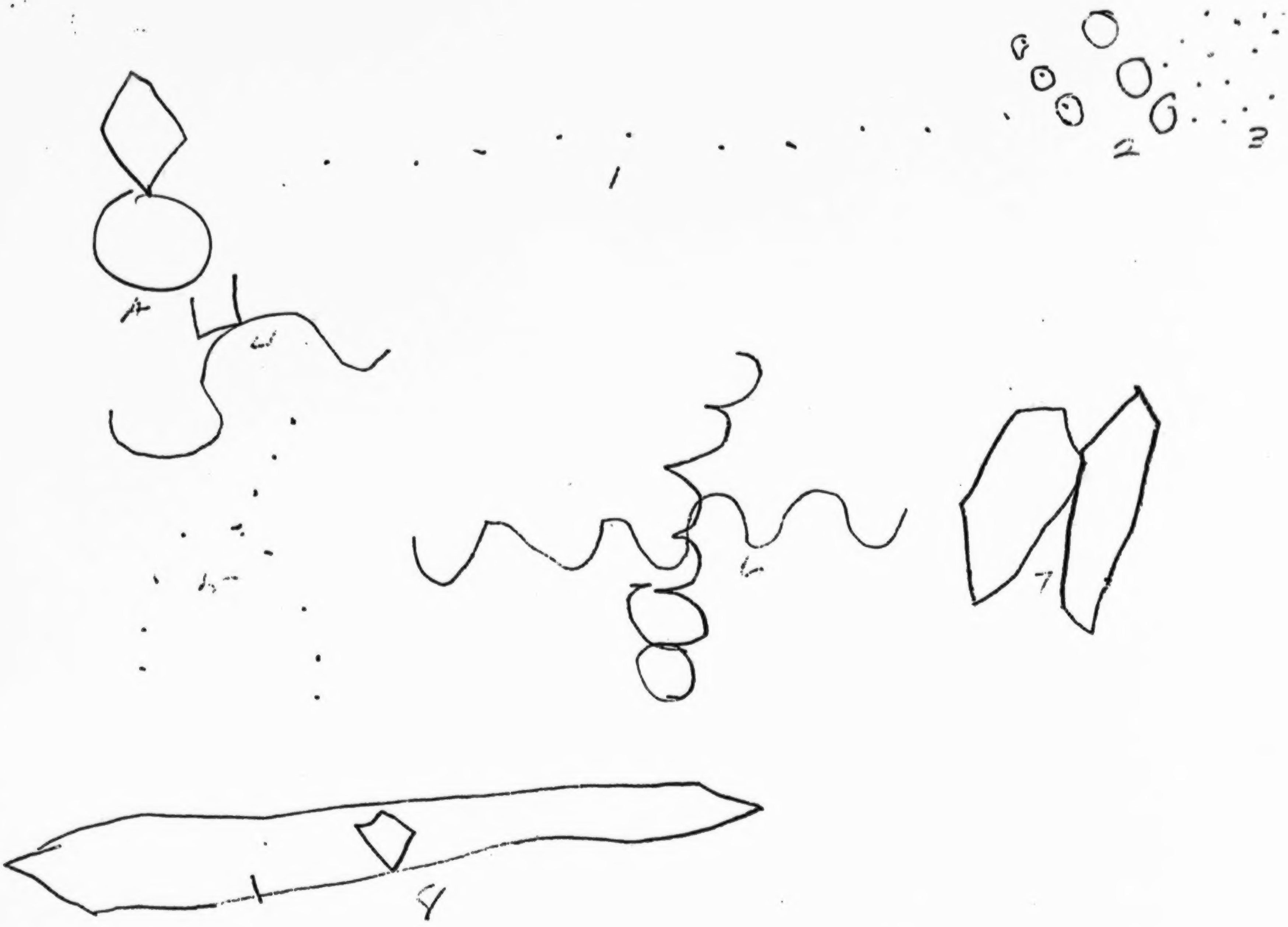
Bender Visual Motor Gestalt Test #2
Koppitz Score: 3
PACER J.







Bender Visual Motor Gestalt Test #2
Koppitz Score : 3
PACER B.



Bender Visual Motor Gestalt Test #1
Koppitz Score: 2
PACER B.

Conclusions

PART I

1. The experimental and control subjects were sufficiently different from the total school population to constitute an extreme group.

2. The AML Behavior Rating Scale is a reliable instrument for screening children with behavior and/or learning problems.

3. Over a two-year period, the members of the experimental group were rated by their teachers higher than the members of the control groups on the M subscale of the AML Behavior Rating Scale.

4. Over a period of one year, the experimental subjects gained approximately one and one-half months more than the control subjects in arithmetic.

5. When experimental and control groups were disregarded, more girls than boys received a total score on the fifth AML rating below 25 points (the point on the first rating above which one qualified for the intervention program).

6. Teachers rated the Bender Visual Motor Gestalt Test lower (more favorably) than did school psychologists.

7. The unmatched experimental subjects who were retained either before the project began or during the course of the project improved more between rating 1 and rating 5 on the AML total score than did the retained control subjects.

PART II

1. Young children reflected family difficulties through their learning and behavior in the classroom.

2. Low and High Risk families with no financial problems and as yet unknown to social adjustment agencies were reached through the school by skilled social workers whose focus was the child and his strengths.

3. Initial contacts by social workers with the majority of Low and High Risk families revealed only moderate difficulties in areas of family functioning. Subsequent work with families indicated that approximately 20% had severe problems, especially in the areas of child functioning and child rearing.

4. Parents were generally seen as affectionate toward their children and caring for them; greatest improvements in family functioning were seen in discipline by mother and supervision by mother.

5. Family cohesiveness was identified as a critical criteria for improved family functioning.

6. PACERS who were retained and were considered High Risk showed significantly more improvement in behavior and less regression on the perceptual motor task of copying designs than did the control subjects.

7. PACERS who attended the summer activity program made significant gains in positive feelings toward self
   relatedness to environment
   independence
   recovery and coping strength

8. Teachers rated the project of value to themselves, PACERS, PACER parents, other teachers, principals, and the community.

9. It was possible to identify children and families with problems and to intervene effectively in their behalf.

10. The process of change was slow, but changed attitudes on the part of adults, teachers and parents reflected increased concern and action in behalf of PACERS and their families.

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APPENDIX B
DIMENSION IV

Further analyses of the 32 families (40%) who were assigned to very disorganized or very rigid on Dimension IV reveals the following information:

1. Distribution of 32 families by SWs.

SW_1 = 7
SW_2 = 7
SW_3 = 5
SW_4 = 6
SW_5 = 7

2. Intensive services to 65% of families.

SW_1 = 4
SW_2 = 5
SW_3 = 4
SW_4 = 3
SW_5 = 5

3. Thirty-one percent of families rated among most improved by SWs.

SW_1 = 3
SW_2 = 2
SW_3 = 2
SW_4 = 1
SW_5 = 2

4. Thirty-seven percent of families rated among least improved by SWs.

SW_1 = 2
SW_2 = 2
SW_3 = 2
SW_4 = 3
SW_5 = 3

5. Twelve percent of PACERS among 5 most improved on AML Scale - Rating 1 to Rating 5.

SW_1 = 3
SW_2 = 4
SW_3 = 1
SW_4 = 2
SW_5 = 3

6. Forty percent of PACERS among 5 least improved on AML Scale - Rating 1 to Rating 5.

$SW_1 = 3$
$SW_2 = 4$
$SW_3 = 1$
$SW_4 = 2$
$SW_5 = 3$

7. Twenty-one percent of families active on Agency rosters - May 1969.

$SW_1 = 3$
$SW_2 = 3$
$SW_3 = 0$
$SW_4 = 1$
$SW_5 = 0$

8. Fifty-six percent of families checked by SWs as having severe problems in one or more areas of Case Management schedule.

$SW_1 = 2$
$SW_2 = 3$
$SW_3 = 3$
$SW_4 = 5$
$SW_5 = 5$

8a. Incidence of severe problems by social worker

Number of Families

SW	Area I	Area II	Area III	Area IV
1	2	2	2	1
2	3	2	0	0
3	3	2	3	2
4	5	3	3	1
5	5	3	3	1
	18	12	11	5

9. Grade level of PACERS at time of initial screening.

K = 15
1 = 6
2 = 8
3 = 3
Total 32

10. Incidence of families by Census Tracts

Tract	Number of Families
1	4
* 3	3
* 4	9
5	2
6	3
7	2
8	4
9	1
10	1
11	1
26	2

* lower socio-economic area

11. Occupation of principal family member.

Occupation	Number
Professional, technical	3
Managers, officials, proprietors	3
Clerical work	2
Sales work	2
Craftsmen, foremen	7
Private household	2
Service workers	2
Laborers, farm laborers, foremen	4
Unknown	3

12. Eight PACERS, or one third of the children in this group, were retained and four were placed in special classes.

13. The eight PACERS who were retained, rated as follows on the WRAT:

	Reading	Spelling	Arithmetic
Improved	3	2	4
No Change	2	1	0
Regressed	3	5	4

There were three retained controls for three of the 8 retained PACERS. None showed improvement; all three showed regression in reading and arithmetic. Two regressed in spelling and one had no change.

14. On the Bender Visual Motor Gestalt Test, the following results were obtained:

	Number of PACERS	
	Test 1	Test 2
High Risk	10	11
Medium Risk	10	6
Low Risk	8	9
No score	4	6
Total	32	32

15. On the Glueck Predictive Indices, the results of social workers' ratings, revealed the following families as improved, no change, regressed.

	INDICES					
	I	II	III	IV	V	VI
Improved	7	9	9	7	3	8
No Change	15	17	18	19	15	15
Regressed	3	4	3	4	6	7
No rating	7	2	2	2	6	2

* CASE MANAGEMENT SCHEDULE : PACE I.D. CENTER

PACER: ______________________________ #________

S.W.________________

DATE:________________

I. CHILD FUNCTIONING: IDENTIFICATION OF INDIVIDUAL AND FAMILY LEVELS (List only family members currently in home)

	FAMILY MEMBER NUMBERS												
FACTORS	3	4	5	6	7	8	9	10	11	12			
a. Physical condition													
b. Intellectual and emotional status													
c. Personality characteristics													
d. Attitude toward parents													
e. Attitude toward siblings													
f. Social functioning													

I. FAMILY PROBLEM LEVEL (Check one)

☐ 1. No significant problems

☐ 2. Moderate problems

☐ 3. Severe problems

☐ 0. No information

CHILD FUNCTIONING

	(1) NO SIGNIFICANT PROBLEMS	(2) MODERATE PROBLEMS	(3) SEVERE PROBLEMS
a. **Physical condition** Appropriate to age. Good health vs. serious disability.	No significant liabilities. Physical maturation appropriate to age.	Delayed physical development. Frequent minor illnesses, e.g. allergies, colds, etc.	Basic physical disability. Chronic illness.
b. **Intellectual and emotional status**	No significant problem.	Emotional problems and/or retardation that limits appropriate achievement.	Retardation and/or emotional problems which seriously restrict ability to function.
c. **Personality characteristics**	Self confidence. Realistic goals. Acceptance of limitations and strengths.	Indecisiveness. Over-reliance on others. Unfounded optimism re ability. Accepts meager achievements. Self-punishing.	Negative and hostile. Over-submissiveness. Impulsive acting-out. Incapacitating emotional dependence. Passivity, withdrawal.
d. **Attitude toward parents** Affectional relationships	Normal warmth, affection, and responsiveness.	Child-parent affection: ambivalent over-dependent over-aggressive withdrawn	Child-parent affection: rejection over-manipulation hostility
e. **Attitude toward siblings**	Natural affection and rivalry with siblings.	Conflict with siblings. Assumption of parental role.	Rejection of siblings. Manipulative, exploitive. Hostility - cruelty, excessive conflict.
f. **Social functioning** Adjustment vs. over-aggressiveness, over-dependence and defiance of authority.	Successful adjustment to: school relationships home responsibilities peer relationships.	Uncertain or tolerated in: school relationships home relationships peer relationships Minor conflicts with authority. Easily influenced.	Over-aggressive, over-dependent, or withdrawn in: school relationships home relationships peer relationships Serious conflicts with authority. Isolated or rejected.

* Adapted from
Coordinating Bureau for Family Services
San Mateo County, California
Family Classification Schedule 1/60

II. ADULT FUNCTIONING: IDENTIFICATION OF INDIVIDUAL AND FAMILY LEVELS (List only family members currently in home)

	FAMILY MEMBER NUMBERS											
FACTORS	MH	FH	3	4	5	6	7	8	9	10	11	12
a. Physical condition												
b. Intellectual and emotional status												
c. Personality characteristics												
d. Social functioning												
SUMMARY - INDIVIDUALS												

I. FAMILY PROBLEM LEVEL
(Check one)

☐ 1. No significant problems
☐ 2. Moderate problems
☐ 3. Severe problems
☐ 0. No information

DIAGNOSTIC SUMMARY: ADULT FUNCTIONING (Use Family Member Numbers when appropriate)

ASSETS	LIABILITIES

II. FORECAST - FAMILY SUMMARY

☐ a. No significant problems & none expected
☐ b. Marked improvement
☐ c. Some improvement
☐ d. No change
☐ e. Deterioration

III. EVALUATION - FAMILY SUMMARY

☐ a. No problems-none developed
☐ b. Marked improvement
☐ c. Some improvement
☐ d. No change

ADULT FUNCTIONING

	(1) NO SIGNIFICANT PROBLEMS	(2) MODERATE PROBLEMS	(3) SEVERE PROBLEMS
a. Physical condition Normal capacity vs. Chronic illness.	No significant liabilities.	Non-disabling conditions. Frequent acute illnesses.	Chronic disabling conditions.
b. Intellectual and Emotional Status	No significant problems	Emotional problems and/or mental retardation that interfere with adult functioning (not completely incapacitating).	Emotional problems and/or mental retardation which seriously incapacitate and limit adult functioning.
c. Personality Characteristics (Observable)	Self confidence. Realistic goals. Acceptance of limitations and strengths.	Indecisive, inconsistent. Over-reliance on others. Unfounded optimism re ability. Accepts meager achievements. Self-punishing - rigid.	Negative and hostile. Over-submissiveness. Impulsive acting-out. Incapacitating emotional dependence-passivity.
d. Social functioning	Identifies with normal social and moral standards re - home job - financial peers marital child rearing community	Socially well-intentioned but easily influenced and corruptible. Over-strict - rigid. Indifferent to peer and community relationships. Tolerated by neighbors. Minor conflicts with authority. Impulsive self-gratification.	Actively hostile toward authority and community standards. Highly rigid and prejudicial judgments. Low moral standards. Isolated and/or rejected by neighbors. Destructive, abusive, exploitive.

III. CHILD REARING (PARENTAL) FUNCTION: IDENTIFICATION OF INDIVIDUAL AND FAMILY LEVELS
(List only family members currently in home)

	FAMILY MEMBER NUMBERS													
FACTORS	MH	FH	3	4	5	6	7	8	9	10				
a. Physical care														
b. Affectional attitude														
c. Parental expectations														
d. Parental training and guidance														

I. FAMILY PROBLEM LEVEL
(Check one)

☐ 1. No significant problems
☐ 2. Moderate problems
☐ 3. Severe problems
☐ 0. No information

CHILD REARING (PARENTAL) FUNCTION

	(1) NO SIGNIFICANT PROBLEMS	(2) MODERATE PROBLEMS	(3) SEVERE PROBLEMS
a. Physical care Adequate care vs. gross neglect.	Basic physical needs met - food, sleep, medical care, etc.	Erratic, inconsistent in meeting basic physical needs - food, sleep, medical care, etc.	Gross neglect of basic physical needs - food, sleep, medical care, etc.
b. Affectional attitude Love and trust vs. distorted attachment or hostility.	Child loved as an individual. Mutual trust and confidence between parent and child. Accepts appropriate dependency. Permits healthy outlets for hostility.	Over-devotion. Over-restrictive. Over-indulgent, over-protective. Ambivalent - accepts then rejects. Low tolerance for child's hostility.	Indifferent - ignores. Overtly hostile and rejecting. Exploits child's affections.
c. Parental expectations Expectation of achievement vs. anxiety, intolerance, over-punitive attitude.	Normal expectation in: school achievement home tasks peer relationships gradual separation from home ties.	Exaggerated fears about child's development and normal emancipatory patterns. Inconsistent, unreasonable or unrealistic demands.	Ignores, disvalues or is destructive re child's achievements. Destructive blocking or acceleration of child's emancipation from family.
d. Parental Training and guidance Responsibility in defining and administering standards vs. indecisiveness, over-rigidity or disrespect for social authority.	Privileges & limitations: Clearly defined. Consistently followed. Parents support one another. Parents abide by expressed standards and values.	Privileges & limitations: Indecisive, inconsistent. Over-coercive. Over-indulgent. Own behavior - inconsistent re standards and values. Sides with child against other parent. Casual re school attendance.	Encouragement of disrespect for social authority (school, police, etc.) Indifferent or antagonistic re school attendance. Over-punitive or completely lax re limit setting. Own behavior - irresponsible, antagonistic toward established authority (anti-social). Uses child to punish other parent.

IV. FINANCIAL FUNCTIONING: IDENTIFICATION OF INDIVIDUAL AND FAMILY LEVELS (List only family members currently in home)

	FAMILY MEMBER NUMBERS												
FACTORS	MH	FH	3	4	5	6	7	8	9	10	11	12		
a. Occupational capacity														
b. Physical, mental emotional factors														
c. Attitude toward job and/or work														
d. Attitude toward dependents														
e. Management of income														

I. FAMILY PROBLEM LEVEL
(Check one)

☐ 1. No significant problems
☐ 2. Moderate problems
☐ 3. Severe problems
☐ 0. No information

FINANCIAL FUNCTIONING

	(1) NO SIGNIFICANT PROBLEMS	(2) MODERATE PROBLEMS	(3) SEVERE PROBLEMS
a. Occupational capacity	Adequate education, training and skill to provide for family.	No specialized skill or educational preparation for job. Dependent on positive labor market to provide for family adequately, or requires special training or help.	No training, skill, education or experience. Unable to provide for family in positive labor market. Not able to use training.
b. Physical, mental, emotional factors Good health vs. chronic disability. (Specific to earning ability)	No physical, emotional, intellectual impairment of potential wage earner.	Physical, emotional, intellectual impairment of potential wage earner but manageable and treatable.	Physical, emotional, intellectual impairment of potential wage earner, non-treatable and non-manageable.
c. Attitude toward job and/or work	Provider: Finds satisfaction in work. Realistic achievement of goals. Good work record. Homemaker: Interested in employment. Realistic in planning re employment. Previous good work record.	Provider: Weak incentive. Satisfied with mediocre achievement. Frequent changes, but not for the better. Layoffs. Homemaker: Interested in employment, but Limited experience Limited skill Not worked for several years Lack of confidence in own ability. Unrealistic in planning re employment.	Provider: Accepts dependent role. Unreliable. Frequent conflicts with boss. Frequent dismissal. Homemaker: No skills, experience, ability. Rejects idea of employment.
d. Attitude toward dependents	Provider: Realistically accepts responsibility for care and planning for family. Homemaker: Accepts appropriate role in planning and management of household.	Provider-Homemaker: Good intentions, but with low standards, or unrealistic attitude toward needs of children. Plans and manages on an erratic basis.	Provider: Refuses responsibility. Carries out responsibility mainly through illegal activities. DA referral necessary to insure support. Homemaker: Deprives children of basic necessities. Uses money for own gratifications.
e. Management of income	Provider-Homemaker: Plans expenditures. Pays debts.	Provider-Homemaker: Impulsive spending - incurs debts. Luxury spending. Reliance on relatives. Unrealistic credit buying. Erratic management.	Provider-Homemaker: Spends on self - not family. Unamortized debts. Garnishment. Fraudulent financial activity. Poor manager. Compounded multiple loans.

Please return to:
PACE I.D. Center
363 El Camino Real
South San Francisco, Ca.
94080
(583-5824)

EVALUATION

You may or may not have had any direct contact with the PACE I.D. Center. Perhaps you know of it by hearsay only. Whether or not you know about our program, we will very much appreciate your returning this evaluation sheet at your earliest convenience - and hopefully by May 1st. Many thanks for taking your time!

1. My contact with the PACE I.D. Center program has been:

Please check
YES NO

☐ ☐ a. DIRECT - FIRST HAND

___ ___ (1) Have participated in the AML Rating Scale screening

___ ___ (2) Have had ___ PACER(S) in my classroom

___ ___ (3) Have consulted individually with the PACE social worker

___ ___ (4) Was a member of the PACE Summer Program Staff

___ ___ (5) Have met with other teachers and the PACE social worker.
___occasionally ___regularly over a period of time

___ ___ (6) Have participated in Case Conferences about a PACER

___ ___ (7) Have included the PACE worker in parent-teacher conferences

___ ___ (8) Other:

b. If you checked YES on any of the items (1) through (8), on the basis of your own experience, how would you rate the program?

___excellent ___good ___fair ___poor ___impossible

Please make any comments you wish:

____

____

____

____

2. My contact with the PACE I.D. Center program has been:

YES	NO	
☐	☐	a. INDIRECT - SECOND HAND CONTACT
___	___	(1) Have heard other teachers talk about PACE.
___	___	(2) Have observed the PACE worker as she has been in my school.
___	___	(3) Have read the PACE I.D. Center brochure or other reports.
___	___	(4) Have been at PTA, faculty, or other meetings where the PACE worker has been present.
___	___	(5) Other:

b. If you checked YES on any of the items (1) through (5), on the basis of your indirect contact with PACE I.D., what is your impression of the program?

__very favorable __favorable __fair __poor __very poor

Please make any comments you wish:

____

____

3. Of what value do you think the PACE program has been to -

	VERY VALUABLE	OF SOME VALUE	NO VALUE
a. You :	___	___	___
b. PACER(S) :	___	___	___
c. PACER PARENTS :	___	___	___
d. Other parents :	___	___	___
e. Other teachers:	___	___	___
f. The principal :	___	___	___
g. The community :	___	___	___
h. Other ________	___	___	___
________	___	___	___

Please comment on next page:

Please comment:

4. At what grade level(s) do you believe the services of a PACE social worker can do the most good?

___pre-school ___kdg. ___1 ___2 ___3 ___4 ___5 ___6 ___None

Why? ___

5. How many children do you have in your classroom this year whom you feel have behavior or learning problems that require more help than you can give them to effect change?

___Number

6. What do you believe would be of most help to you and to parents in assisting a child with problems to experience more success?

___ time: to discuss, to plan

___ assistance in the classroom (teacher-aides)

___ special learning materials

___ evaluation of the problem

___ consultation when needed with:

___ other:

Please comment: ___

Additional Facts and Figures

1. Twenty-four experimental and twenty-four control subjects were retained.

2. Thirteen experimental and three control subjects were placed in special classes.

3. Twenty experimental families and eighteen control families were on the active roster of community agencies, May, 1969.

4. Forty-one experimental families and thirty-one control families were on the inactive rosters of community agencies in May, 1969.

5. In the Spring of 1968, PACER parents organized a group, PARENTS FOR PACE, and attempted to sustain the interest in prevention.

6. Referrals of PACER families were made to forty-five different community agencies by social workers during the two year intervention program.

7. AML Scale: The top 10% or high scoring children were the population from which subjects were drawn. The 10% cut-off point readily identifies schools with the greatest number of children in difficulty.

District I	Number Screened K - 4	Top 10%	Percentage of District Population K - 4
School 1	289	13	4.4%
2	282	16	5.6%
3	434	27	6 %
4	500	43	8.6%
5	389	36	9 %
6	724	69	9.5%
7	355	37	10 %
8	497	58	11.6%
9	440	57	12.9%
10	457	79	17.2%
11	377	88	23 %

District		Number Screened K - 4	Top 10%	Percentage of District Population K - 4
II				
School	1	195	23	11.7%
	2	193	8	4.1%
	3	200	45	22.5%
III				
School	1	205	17	8.2%
	2	123	17	13.8%
IV				
School	1	281	28	9.7%
	2	156	18	11.5%

8. Siblings of experimental and control subjects:

	Older	Younger	Not known
Experimental	143	102	8
Control	131	93	48
Total	274	195	56

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    - Mater Dolorosa
    - All Souls

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